The Journal of the
American Medical Association

VOL. XXXIII CHICAGO, ILLINOIS, NOVEMBER 11, 1899. No. 20

Original Articles.

FOUR CASES OF CEREBELLAR ABSCESS: ONE SUCCESS, TWO AUTOPSIES.*

BY B. ALEX. RANDALL, M.D.
PHILADELPHIA.

The serious complications of ear disease have grown increasingly frequent since the influenza epidemics came and continue with us, and increasing post-mortem and surgical experience is clearing up the mystery which used to surround many of them. Better treatment of the acute and chronic suppurations is lessening the danger which they entail; rational surgery of the tympanum and mastoid, less timid and tardy in the hands of many than it formerly was with the few then thought very radical, is saving many a case half over the verge; and the clinical recognition of intracranial disease is revealing many of the operable cases before all chance of success has passed. Yet cases will continue to offer many enigmatic or contradictory signs, only to be unraveled in the autopsy; and unexpected complications will be met in exploratory surgical intervention; and the following cases, if lacking in brilliancy, may yet have very practical instruction for others as well as myself, and seem worth recording as additions to those already published.

CASE 1.—C. R., aged 15 years, came on Oct. 27, 1894, complaining of pain, and swelling of the right mastoid. The ear had been discharging slightly for three years, since scarlatina, yet had been hardly noticed; but five days before, a box on the ear had been followed by nausea, pain and malaise, which had increased to the condition presented. The tender, red, and swollen mastoid fluctuated markedly, his temperature was 100.6 degrees, and his appearance anxious and serious. Immediate operation was advised, but declined without home consultation. Next day he was more comfortable under hot douching, purgative and rest, and he was sent to the University Hospital and prepared for operation. Mastoid chiseling was done under ether, on October 29, two drams of foul pus having been evacuated by the incision of the soft parts, but the bone surface seemed intact. The bone was very hard and sclerosed, and pus found with little caries only when the antrum was reached. No sinus could be found leading farther; irrigation passed freely out by the auditory canal, so the antrum was curetted and packed. The temperature of 102 fell to normal, but by midnight had reached 104.4, and after a brief fall to 101, rose by noon to 104, and after slight abatement was a little higher at midnight. Sponging was followed by a prompt fall; change of dressing showed nothing especially amiss about the wound; his eye-grounds still showed nothing abnormal, and his pulse and respiration were commensurate with his temperature—varying from 90 to 116 and 24 to 30 respectively. Mentally he was querulous and restless, but with little definite complaint. Renewed examination when his temperature went up to 105 degrees on the afternoon of the 30th, revealed pleural friction on the right side, and this condition rapidly went on to effusion and lung consolidation, with high fever little influenced by sponging or a dose of antipyrin, gr. viii, the left lung following the right. No rigor had been noted, there had been no jugular tenderness nor swelling about the neck, and the head symptoms continued apparently trivial. Supporting treatment with quinia and respiratory stimulants seemed of no avail, antipyrin, gr. viii, brought the temperature to 101, momentarily, but it rose as promptly, and purulent expectoration and increasing respiratory failure marked the advance of lung abscess, and he died on the morning of November 4, six days after the operation and thirteen days after the injury.

The autopsy, twenty-four hours after death, showed amazing destruction of both lungs, with pleural empyema, worse on the right; without other important visceral lesions, except slight appendicitis. The dura mater was engorged and adherent, the pia mater clouded, and in removing the brain two drams of pus was lost from a cerebellar abscess. The dura was apparently intact, merely congested bone separating it from the tympanic cavities. Small necrotic remains of the ossicles showed the long-standing character of the otorrhea, and that more sweeping exenteration of the cavities should have been done; but the clinical diagnosis that intact bone was present in all deeper directions was fully confirmed. An interesting point was the indentation of the sphenotemporal lobe where it rested on the extradural abscess over the tympanic roof; and while the dural surface was not even injected, the pia in relation to it was inflamed, red softening of the brain substance was well marked, and in another day a temporal abscess would doubtless have been fully formed. There was doubtful evidence of any phlebitis of the lateral sinus or jugular vein, and only loose clots, evidently of post-mortem formation. The cerebellar abscess was as large as a pigeon's egg, with a thick pyogenic membrane, thinnest where it had been adherent in proximity to the antrum, and had been torn in removing the brain. While it might have antedated the injury, this, like the lung abscess, was probably sequent to the inflammation awakened by the blow.

CASE 2.—Dec. 4, 1895, Nellie S., aged 14 years, was referred to me at the Polyclinic Hospital, by Dr. Seiss, with a post-grippal suppuration of the right ear, of two months' duration, and granulations covering the back wall of the canal. Exploration was impossible without general anesthesia, so ether was given for exploration; and while all preparations were made for a sweeping operation, only a superficial lesion was thought probably present. The probe passed freely back into the mastoid, and on laying the field bare the back wall of the canal

*Presented to the Section on Laryngology and Otology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

was largely lost, the mastoid was one huge cavity, and the very large and somewhat forward sigmoid sinus was bare for an inch, and covered with granulations. There was considerable caries of the inner plate with little extradural collection, so some two square inches of dura were laid bare, and solid bone, apparently healthy, reached in all directions. The general condition was bad, but the healing fairly prompt, and she was discharged and allowed to become an out-patient after ten days. Two weeks later, without definite burrowing in the neck tissues, an abscess formed at the clavicle, and on evacuation could be followed two inches upward beneath the sternocleidomastoid. Complete healing was prompt below, but some oozing of pus from the mastoid sinus continued, appetite failed, and occasional vomiting and other serious symptoms appeared, confining her to bed. As no bed was then available at the Polyclinic, she was admitted Jan. 19, 1896, to the University Hospital, and growing suddenly worse on the evening of January 23, I operated at once, expecting from her subnormal pulse of 76 and

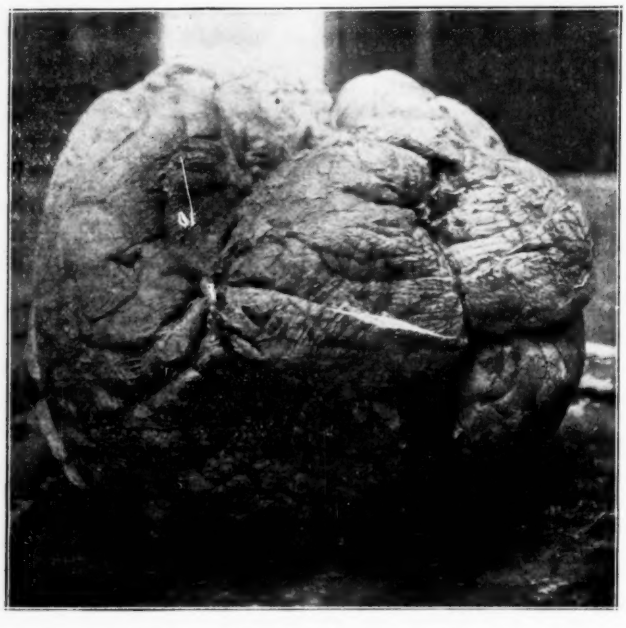


Fig. 1.—Brain of Case I, showing depressed and discolored area of phenotemporal lobe near slit-like opening of abscess in right cerebellar lobe. I. Opening of cerebellar abscess. II. Affected temporal lobe.

temperature of 98 degrees to find cerebellar abscess. Considerable caries of the inner table of the petrous bone was followed deep into the middle and cerebellar fossæ, with some extradural pus there. I enlarged backward to explore the lateral lobe of the cerebellum. I had frequently condemned the backward enlargement of the bone wound as inferior to a separate aseptic exploration in this field, and probably deserved misfortune for abandoning the principle. The rongeur bit off the large mastoid emissary close to the sigmoid sinus, and all efforts to arrest the bleeding failed, so the wound had to be packed, and further exploration deferred. The patient reacted, and under nutrient enema was apparently gaining, but bleeding recurred when the packing was gently removed after forty-eight hours, and as the vessel was nearly as large as a lead pencil, the packing had to be at once replaced. She grew slowly weaker without any localized symptoms, and died at midnight on the 27th. No post-mortem was permitted, but I have no question as to the existence of a pus collection in the cerebellum, although there was little or no marked bulging of the dura in the parts exposed in the uncompleted exploration.

CASE 3.—Howard R., aged 6, was brought to the Children's Hospital suffering with a middle-ear suppuration of acute onset, but of slow progress, for two months, and recently followed by mastoid swelling. As there was fluctuation, he was sent to the University Hospital for operation, and his mastoid chiseled and emptied of carious bone and flabby granulations, on Feb. 17, 1897. Nothing unusual was noted until in making the toilet of the wound preparatory to packing, a rough overhanging edge of the cortex posteriorly was scraped smooth, and a small bone sinus found which led through to an abscess cavity about 1 cm. in diameter in the cerebellum. This was scraped clean and packed, but proved exceedingly slow in healing, showing a little oozing after all other parts of the wound had healed. This had apparently ceased, and the child had long been in excellent condition when he was lost sight of, three months after the operation.

CASE 4.—Katie H., aged 4 years, was brought to the Children's Hospital on Feb. 18, 1899, with history of post-scarlatinal suppuration of the right ear since November, followed by mastoid abscess, incised three weeks before, with formation of a discharging sinus be-

Fig. 2.—Brain of Case III, showing abscess cavity in sectioned right cerebellar lobe.

hind the ear. After incision much head-pain existed, especially on the right side. For the last four days her condition had grown serious with vomiting; for a week convulsive twitchings of the left arm and leg, without paresis; hand and head movement toward the right, and considerable emaciation, on the basis of which a diagnosis of cerebellar abscess had been made by Dr. L. J. Hammond, who had seen her and urged operation. There was little mental disturbance, and the child turned the eyes as directed and made other movements, revealing no paresis except a slight weakness of the right externus, with this pupil larger than its fellow. The convulsions seem to have been general and exhausting, and the child was thought to be dying when brought to the Hospital; but she reacted well to stimulation, and had no notable symptoms during her few hours in the house. Temperature was 98.4 degrees, respiration 20, and the pulse but 88, had been almost 150 when Dr. Hammond saw it. There was no defined area of pain or tenderness to pressure or percussion except on the mastoid.

Exploratory operation was decided on, and done by the resident, Dr. Myers, in the incapacitation of my hand. The mastoid was emptied of carious bone and granulations, but no defect of its inner surface could

be discovered; so, in the absence of any localizing symptoms, further intervention was delayed. She reacted and rested comfortably until midnight, then sank rapidly and died about 5 a.m.

Autopsy showed marked excess of fluid in the arachnoid and ventricles, and pus oozed from the cerebellum when it was removed. The cerebellar surface seemed normal, as did the lateral sinus and walls of the fossa; but an abscess about 3 by 5 cm. occupied nearly the entire right lobe. There was considerable plastic lymph at the base on pons and medulla, and some clouding in the cerebral sulci.

These cases serve well to illustrate the difficulties of diagnosis in the matter of intracranial abscess, especially in the cerebellum. As stated in my paper on extradural abscess, read at the Atlanta meeting of the Association,[1] symptoms are sometimes wholly lacking and the lesion is unexpectedly found at an operation or postmortem. Evidences of intracranial pressure, presumably of an abscess, may be noted in slowed pulse or subnormal temperature; yet no indications can be found as to localization: subnormal temperature, indeed, is often present after la grippe or other depressing illness, without any unfavorable meaning. The eye grounds and visual fields and the eye muscles must be studied, although they all too rarely give any timely aid. Pain, spontaneous or on pressure, is generally present, but will as often mislead as guide us to the seat of trouble. Multiple abscesses may be present to confuse the localization, or undeclared at first, to bring to naught our success in healing one of the lesions. Meningitis may mask the abscess indications or carry off the patient in spite of most skilful care. Finally, delay in waiting for localizing symptoms all too often makes surgical intervention little more than "an antemortem autopsy."

With this last factor we must deal conscientiously and courageously—thorough examination of the aural and the general condition must be made and the facts and possibilities carefully weighed and stated to the friends; and permission should be asked for intracranial exploration as soon as this is judged to be advisable. Skilfully done under modern methods, this should add little to the dangers of the case when compared with those of unrecognized brain abscess. If full confidence is not accorded to your view of the conditions, a consultation should be held unless the indications are utterly inconclusive and you can still temporize.

When operation is decided on, its exploratory character must not be lost sight of; and if localization is not conclusive, alternative procedures should be planned and compared. The tympanum and its neighborhood should be first explored—functionally and bloodlessly if it presents no indication of present caries or suppuration—surgically if there be any question of its direct communication with the assumed intracranial abscess. The usual starting-point of the trouble in the cases which concern us as aural surgeons—the tympanum—commonly has some macroscopic connection with the inner purulent focus, and this may be our only guide to its location. All caries is to be followed up and radically dealt with, never sparing the dural surface of the bone if this be even suspicious. But the dura must not be lightly opened when intact. Easy as it may seem to explore the parietal lobe or the cerebellum from the mastoid opening, I question if this should be often done. Our exploration may prove negative; and, however harmless we may consider an aseptic cranial trephining and brain exploration, one must have unbounded faith in his antisepsis to be willing to open locally into meninges and brain through suppurating ear cavities. It is simpler and safer to make a separate skin flap and a formal cranial trephining at the points of election, even though we have uncovered the dura of middle and cerebellar fossæ in our mastoid work. This is a matter like the laying forward of the soft parts and boldly chiseling the bony auditory canal to remove a foreign body there impacted. To the inexperienced it seems much more formidable to do this palpable damage than blindly to inflict unknown and probably serious injury by would-be conservative gropings in the depths of the external meatus. The exigencies of the case may forbid such time-consuming divisions of the operation as entailed in separate explorations of the mastoid, the middle fossa, etc. It will be useless to have been strictly aseptic on a patient like this, lifeless from shock; but it would seem self-evidently best if possible.

[1] See JOURNAL, Sept. 12, 1896, p. 571.

REPORT OF CASE OF BRAIN AND OTHER ABSCESSES—FOLLOWING TONSILLAR ABSCESS AND NON-PERFORATIVE SUPPURATIVE OTITIS MEDIA.

BY D. MILTON GREENE, M.D.

GRAND RAPIDS, MICH.

On January 11 Dr. Vanderburg asked me to see Dr. L. V., who had been suffering from some obscure disease, for about five weeks. He had been under the care of two physicians during his illness, having changed physicians once during the five weeks. A diagnosis of tonsillitis was made in the beginning of his illness, and typhoid pneumonia later. At the time of my first visit the following history was obtained.

Five weeks before he was taken with pain in his left ear, side of head and face, with extreme swelling on these parts, extending particularly into the neck and throat. He had several chills followed by fever, sore throat, swelling of the tonsils, and finally rupture and discharge of pus in the throat. His temperature fluctuated between 98 and 105 degrees, from December 15 up to three days before I saw him, when he had a severe chill. The pulse had been from 70 to 110 during the preceding five weeks. The tongue was coated a dirty grey. His diet had been mainly beef tea and milk during his illness. An abscess had formed over the tenth rib on the left side which had been opened, and several ounces of pus evacuated. He had been rapidly losing flesh, until he was at this time a mere skeleton. His mind had been perfectly clear except that in one or two instances, when his temperature was high, he was slightly delirious. He slept but little, had conversed well, but at times appeared exhausted, and did not want anyone to talk to him. The bowels had been constipated from the beginning. Three days before I saw him he had had a severe chill, and since then had been able to utter but one word, which was his reply to every question and every word said to him. This was "No." When he wanted anything he said "no." When he meant yes he said "no," and on hearing himself say no when he meant yes, he would realize his mistake and nod his head, so as to have his meaning understood. After obtaining this history, a careful examination revealed the following condition:

He was extremely emaciated. The skin of the body and extremities was covered with scales of dead epithelium, that of the face was sallow, and the face pinched

*Presented to the Section on Laryngology and Otology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

and expression anxious. The external appearances of the eyes were normal, except that there was enlargement of the right pupil. Ophthalmoscopically, the eye-grounds appeared normal, but anemic. Otoscopic examination showed the right ear normal, the left auditory canal inflamed and swollen at the posterior, superior portion, the drumhead bulging, the membrana flaccida inflamed. Pus was clearly visible through the membrana tympani, filling the tympanum. There was some edema around the point of the mastoid, and in the neck below the ear. In the pharynx there was considerable swelling back of the faucial pillars on the left side. Pus was flowing from the region of the left Eustachian orifice, which was not plainly visible on account of the swelling of the surrounding tissue. The turbinate coverings were hypertrophied, especially the inferior. Auscultation revealed normal respiratory murmurs in the right lung, but bronchial râles in the apex of the left, and no sounds in the base. The percussion note was normal in the right chest, but in the left there was dulness over a large area. The impulse of the heart was so plainly felt over a space of several inches in diameter, that it resembled a large aneurysm. The intercostal spaces between the fourth, fifth and sixth ribs were bulging from the sternum to the left about five inches. The knee-jerk was normal, and there was no ankle-clonus. There was extreme hyperesthesia over the entire left side, causing great discomfort in passing the hand over the parts. Muscular co-ordination was perfect. He made no complaint of pain anywhere.

Spoken speech seemed to be received and interpreted well. While his speech was confined to the one word "No," that was plainly and perfectly produced. He could not echo, nor repeat words spoken to him, but seemed to make the effort, always ending in "no." He could understand written speech. He could see words but he could not write them. When shown his name written and asked to write it, he would always make about the same characters, which were like a reversed or inverted script capital O, with two lines crossing at an angle of about 80 degrees, and one left curve beginning near the center, drawn down and to the right. He was agraphic in the right, and could not write a word or letter with the left hand. His pantomimic powers were perfect, so far as I could discover. Extragraphic symbols seemed to be understood. No mind blindness, or psychic blindness existed. Up to this time there was no paralysis of any kind. The pulse was 60, temperature 98 degrees.

Believing in the "utterance center" of Broadbent, and feeling convinced that his aphasia was disturbance in the utterance center, and not from paralysis, I concluded that there was an abscess forming at the foot of the two central convolutions, and my diagnosis was, brain abscess in that location; with non-perforative suppurative otitis media, probably involving the mastoid antrum; abscess in the left chest, among the large vessels over the heart—probably mediastinal—from lymphatic absorption secondary to lymphatic abscess in the neck, which was the result of the suppurative otitis media.

On January 13, assisted by Drs. Graves and Vanderburg, I opened the mastoid and tympanum with a hollow chisel, after the regulation method, and pus was found in small quantity, and thick. We then opened the abscess in the left chest and found it mediastinal. It contained a full quart of very offensive pus.

The patient suffered no shock and improved rapidly for a week, gaining several pounds in flesh. A day or two after the operation paralysis was noticed in the right face, which gradually extended to the shoulder, arm, forearm, and fingers, then to his hip, thigh, leg, foot and toes. About two weeks after the first operation an abscess formed on the left side of the pharynx back of the pillars, in the region where swelling had existed from the time of the first examination. This was opened on February 10. Swelling of the lymphatics occurred two weeks later, along the deep jugular vein, with formation of pus. This abscess was opened at the time of the operation on the brain, the pus and the diseased glands curetted out, and it healed kindly. There was no doubt that the brain abscess had extended upward along the Rolandic fissure, from the utterance center of Broadbent, which is just at its foot. This was evident from the paralysis and its course. The last three days he vomited frequently, and he had diarrhea for a week, passing feces and urine in the bed, unconsciously. Urine analysis had been made frequently, but nothing important had been discovered. Repeated ophthalmoscopic examinations revealed no choked discs. There was, however, extreme anemia, and pallor of the optic nerve-heads throughout my examinations. The right pupil remained enlarged until after the second operation. No paralytic aphasia existed up to this time.

February 22 he could still say "no," and whine. Operation for the brain abscess was advised five days after the first operation, but consent was not obtained until five weeks later, viz., February 22. At this time paralysis of the right side had become complete, and saliva was pouring from the right angle of his mouth. He was in a half stupor, but as he had great dread of an operation, he watched every move and listened to every word when they were talking about an operation, and he would say "no, no, no." The temperature had been fluctuating between 95 and 102 for weeks. The pulse had ranged from 60 to 110. On February 22, assisted by Drs. Graves and Groner, I made an operation. A large inverted U-shaped flap, 3½ by 3½ inches, was made and turned down over the ear and cheek. The blood-vessels were secured as fast as cut. With a three-quarter-inch trephine, a button of bone was removed one-fourth inch in front of, and two inches above, the auditory meatus. No pulsation was felt in the brain. The opening was enlarged upward along the fissure of Rolando and the abscess was readily reached. On aspirating, the hypodermic barrel was filled with offensive pus. The abscess was opened by cutting through a half inch of brain tissue, after the dura mater had been removed. Fully three ounces of extremely fetid pus was removed from the cavity, which was irrigated with two or three quarts of hot boracic acid solution. Large, flaky chunks of pus were dislodged with the nozzle of the syringe and the finger. The abscess cavity was packed with iodoform gauze, and left for forty-eight hours. The U-shaped flap was transfixed through its center, for introduction of drainage, and by continuous suture of black silk the whole flap was carefully reunited. The patient rallied from the operation and did not vomit. Four hours after the operation the pulse was 160 and the temperature 100, and I ordered a hypodermic of 1-30 of strychnin given once, and half an ounce of whisky every hour, and under its influence the pulse rapidly fell to 110. In three days the motor paralysis passed away, and in a week he got up and walked, though he was but a living skeleton at the time of the operation. His appetite was good, he slept well, and gained at least fifteen pounds in two weeks. His speech gradually returned so that he could talk very well, though at first it was something of an effort. The discharge gradually grew less, and at this time had nearly ceased.

The chest abscess and other wounds had nearly healed before the brain operation was made. Once in twenty-four hours the abscess cavity was repacked with iodoform gauze, for five days; after that a rubber drainage-tube was used. The second packing required less than one-half of the quantity of gauze used in the first. The circulation in the brain was rapidly restored, and with it came restoration of the lost motor function.

At the end of two weeks all flaps were healed, and only the drainage-hole remained open, and with a small drainage-tube in the scalp. At the end of this time he passed from under my observation, and was taken to his sister's home in the country a week later. I heard from the case from time to time for several weeks, to the effect that he had gone along with normal temperature, eating, smoking and gaining in flesh. I heard that later he was having bad symptoms, that the wound was re-opened and the brain explored with aspirating needles, in search of pus, but none was found. He suddenly developed cerebritis and died, but I have been up to this time unable to get particulars. No autopsy was made.

RECAPITULATION.

1. Systematic examination, as suggested by Wyllie, was made on my first visit and from time to time thereafter.

2. All notable signs and symptoms present were recorded and have been mentioned in this report.

3. There was no sweating after the chills, nor at any time during his illness, which is the reverse of what we would expect.

4. The abscesses, other than the one in the brain, seemed to be of lymphatic origin.

5. All abscesses were confined to the left side.

6. Whether the abscess in the tonsil preceded, or was simultaneous with the formation of pus in the tympanum is uncertain, as no otoscopic examination was made at the time.

7. The patient received a severe blow over the left ear a short time before his illness, which might have been an etiologic factor in the case.

8. It is stated that the patient had suffered severely with gonorrhea some months previous to his last illness, which possibly bears on the etiology of abscess formation, though pus from the different abscesses was repeatedly examined for gonococci, and none found.

9. The absence of choked discs, the constant dilation of the right pupil, the reaction of both pupils to light, the perfect visual fields, so far as could be ascertained with the patient in such a weakened condition, are all quite out of the ordinary.

FRACTURED BASE, WITH DEAFNESS, TINNITUS, VERTIGO, EXOPTHALMUS, FACIAL PARALYSIS, MASTOIDITIS.*

BY J. A. STUCKY, M.D.

LEXINGTON, KY.

The following case is presented on account of its peculiar interest from an etiologic standpoint, as well as its uniqueness and rarity.

F. T., a jockey, aged 21, on March 15, 1899, was exercising a horse under a shed when the animal reared, throwing the rider against the rafters, and striking his head with such violence that he was thrown to the ground. He was unconscious for only a short time. Dr. J. M. Allen saw him shortly after the accident, and reports that there was a large contusion of the scalp covering the top of the head, and this was rapidly followed by edema extending down to both ears, more marked on the right side. He complained of great noise in his right ear, and deafness, and was very restless. There was no hemorrhage from the nose or ear, though the patient says he "spit up a few mouthfuls of blood." The scalp was shaved and an ice-cap applied, 10 grains of calomel given, and an anodyne to relieve the restlessness. A week later he became very deaf in the right ear, and this was followed by facial paralysis of the same side, great tinnitus, and vertigo. I saw him for the first time five weeks after the injury was received. He presented a dazed, listless appearance with considerable bulging of the right eye—exophthalmus—with several hemorrhagic spots in the deep conjunctiva and some dimness of vision. Ophthalmoscopic examination was negative. His temperature was 101, tongue coated, pulse 72. There was complete paralysis of the right side of the face, almost no hearing in the right ear, swelling of the soft parts covering the mastoid, with marked tenderness over the tip and the antrum. The auditory canal was red and swollen, the posterior superior wall bulging. The membrana tympani presented a gangrenous appearance, being of greenish black color, with small laceration in the superior posterior quadrant through which exuded an offensive fluid.

His mind was sluggish and he complains of constant headache, fulness and roaring in the ears, constant vertigo, a feeling as if he would fall to the left, and inability to sleep. There was some aphasia, unsteady gait, speech difficult at times and incoherent.

I concluded from the symptoms and history of the case that this condition of affairs was the result of a fracture of the base of the skull. The middle ear was filled with clotted blood, and the ear symptoms, headache and facial paralysis were the result of pressure within the middle-ear cavity and antrum, accompanied by a periostitis and general inflammation of the drum cavity.

Opening the mastoid with a view of doing the radical operation, the Stacke-Schwartze was decided on as being the most rational procedure for removing the exciting cause of the trouble.

On the following day I operated at the Good Samaritan Hospital. An incision, longer than is usual, was made from below the tip of the mastoid to one-half inch or more above the linea temporalis. The usual method of doing the radical operation was adhered to. After separating the soft parts and bringing the field into view, I found the membrana tympani so infiltrated and disintegrated that nothing short of the Stacke-Schwartze operation would accomplish anything. The periosteum was much thickened and very vascular, the antrum and cells were filled with firmly adherent blood-clots; no pus; no evidence of necrosis. The attic and middle ear were also filled with clotted blood, but there was also evidence of inflammation and disintegration of the contents. The malleus had separated from the drum and the incus from the stapes, and were hanging in the cavity imbedded in the firm clot of blood. After removing the clots and inflammatory product, the parts were washed first with hydrogen dioxid, then bichlorid solution, 1 to 3000, the membranous canal was brought into place and retained by a tubular tampon made of an iodoform gauze strip, and the mastoid wound dressed in the usual manner.

On account of the extreme hardness and density of the outer layer of bone, and the great depth of the antrum and pneumatic cells, the operation was tedious, consuming one hour and ten minutes. Notwithstanding

*Presented to the Section on Laryngology and Otology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

this the patient was put to bed in good condition. The following day his mind was clear, and all disagreeable symptoms had disappered, except the facial paralysis. His recovery has been uninterrupted. On the fourth day he was up and walking through the corridors of the Hospital, and in one week was discharged from the ward, to be treated as an out-patient.

DISCUSSION ON PAPERS OF DRS. RANDALL, GREENE AND STUCKY.

DR. A. DEVILBISS, Toledo, Ohio—Unfortunately the two last cases of fracture of the skull I have had are dead. One died too soon for me to operate and we only had an autopsy; the other died shortly after operation. I like to hear of these cases of recovery.

DR. J. E. SHEPPARD, Brooklyn, N. Y.—I am very sorry we do not know more of Dr. Greene's cases. To me they are of especial interest because we see so many of them. I would like if he could tell us in his closing remarks the location of the cranial abscess. He certainly had an abscess around the mastoid as a complication of an intracranial one. Those of themselves are interesting complications.

Then as to Dr. Randall's statement about opening into the cranial cavity and not doing the operation through the antrum, I think that is a very important item. It has been recommended, by a number of men, that we shall make an opening into the mastoid antrum and through that an opening into the middle and posterior fossæ. Dr. Randall's recommendation to make a separate opening into the cranium is important.

Just a word in reference to Dr. Stucky's case: It is one of great interest, and it seems to me to be an exceptional case of a class that is not very frequent. I have seen a number of cases with hemorrhage from the ear, in two or three of which the blood passed through the Eustachian tube and appeared in the pharynx with other more or less prominent symptoms. It would seem, in this case, that the fracture involved the posterior inferior quadrant, and from there the infection entered the mastoid cells and the tympanum. It is almost marvelous that the infection did not extend into the cranial cavity after extending into the mastoid cells and the antrum. The intracranial symptoms would seem to be due to hemorrhage, which was afterward absorbed.

DR. RICHARDS—I had a case in which a man became unconscious after falling down-stairs, followed later by partial recovery of consciousness, combined with prolonged tinnitus and loss of hearing. There was apparently fracture of the base without infection.

DR. T. R. CHAMBERS, Jersey City, N. J.—I can report a case where a girl was thrown from a bicycle and a milk wagon ran over her body. Blood issued from her ear, the tympanum was broken, and for three days fluid ran out of the ear. My prognosis was very guarded, but she is now around and about and has bought a new bicycle. I have seen more than one case in which the tympanum was broken. The prognosis in such cases we believe is very grave, but they sometimes get well, even with a fracture through the petrous portion of the temporal bone.

DR. E. J. BERNSTEIN, Baltimore, Md.—I would like to ask the Doctor how to get a good illumination of the deep parts while operating. That has always been a great trial to me. I have tried the electric light direct and reflected and various other things, and at last I have concluded to try to use an acetylene-gas lamp and have the chloroform removed for a moment while I make a momentary inspection and then remove the lamp.

As to fracture of the base of the skull, I had a boy in the House of Refuge who had been doing some skylarking and fell, alighting on his head and fracturing the upper portion of the external auditory canal. The boy lost fully an ounce and a half of blood and serum, and was put to bed. I was called out early to see him. I found him lying there unconcerned, and as long as he did not complain I did nothing. He got well without any untoward symptoms.

DR. D. MILTON GREENE, Grand Rapids, Mich.—The case was said by the first attending physician to be tonsillitis, and the next attending physician said it was typhoid pneumonia. When I was called I found no perforation of the drum membrane. There was pus in the tympanum, an abscess over the heart containing a quart of pus, and an abscess over the tenth rib containing several ounces of pus. There was also an abscess about the pillars of the fauces that contained pus. Later there was a hard feeling along the jugular vein, that led me to suspect sinus thrombosis. In making the operation later on the vein, I opened up along the jugular vein and found that this was only a lymphatic involvement. At the time I first saw the patient, five weeks after the onset of the disease, when I discovered pus in the middle-ear cavity and these various abscess cavities, I found that the patient had had a chill and was only able to say one word—"No." He was able to say "no" as distinctly as ever he could say any word, but he could say no more. I diagnosed abscess of the brain, probably involving the centers of speech. The patient finally became paralyzed, first in the arm and shoulder, after I had made my diagnosis. Many of these points are opposite to the symptoms laid down by the authorities. And that is why the case is important, because it does not agree with everything written. When the arm was paralyzed, the patient could use only the forearm and hand, and later only the hand; and so with the lower extremities, he could use the leg and finally only the foot. From the region of the fissure of Rolando I removed fully three ounces of pus. The patient recovered from his paralysis and within three weeks was up and around. I will not go on and detail the rest of the case. I thank you for the kind privilege of saying a few additional words on the subject.

DR. B. A. RANDALL, Philadelphia—The point noted by Dr. Sheppard is one that I brought out several times in my paper, and particularly in the second case reported. The points of diagnosis of cerebellar abscess can of course only be worked out from the details of cases as here laid down, and then not always with certainty. I leave that to be read later by any who are sufficiently interested in the paper.

In reference to Dr. Stucky's case, I would suggest that we had there a fracture of the tympanum which led to severe bleeding, disrupted the articulations of the ossicles and gave rise to the vertigo and other symptoms. It is certain that there are many cases of head-injury, with bleeding and then with long-continued and most profuse leakage of serous fluid from the ear, purely tympanic; although they are set down in the books of surgery and otology, too, as being cases in which there is loss of fluid from the brain. The fluid is really only serum from the lining in the tympanic cavity. We can often see this in inflammation of the ear when there is no question of leakage from the cranial cavity.

So far as I can judge as to Dr. Greene's patient, such cases are rare, but they are not at all unique. I have seen several such cases, but for various reasons have not reported them. I recall a case that occurred in an elderly woman who seemed nearly well, when I saw her, after a very slight tympanic inflammation. The surgeon in charge of the case did not operate nor call me in when serious symptoms arose. There were signs of thrombosis and at the autopsy a profuse purulent collection was found. I was not at the post-mortem, and did not obtain full details from those who made the examination, so I could not say positively whether we had there a brain abscess or not. But such cases are not unique.

DR. J. A. STUCKY, Lexington, Ky.—I have only one question to answer, that of Dr. Bernstein. When I do not succeed with the head mirror, I use the simple and very effectual apparatus designed by our Secretary, Dr. Holmes. It consists of an electric lamp placed on the stand, very similar to the douche stand we find in the hospitals. It has a reflector and gives a sixty-candle-power light. The light is very brilliant and can be thrown on the parts anywhere. If I want to use a speculum I place the lamp opposite the patient and use a reflector.

QUESTION—What do you think of using the acetylene gas?

ANSWER—I have not tried it.

THE BRITISH steamer *Nith* was, on November 4, fined $5000 by Collector Stone of Baltimore for failing to produce a bill of health from Constantinople. The captain states that before sailing he endeavored to obtain such a bill, knowing the regulations regarding such matters, but on account of unfortunate circumstances could not obtain one from the proper authorities in that country and for that reason appealed to the secretary of the treasury for relief.

INTESTINAL LESIONS ASSOCIATED WITH INTRA-ABDOMINAL OPERATIONS, WITH REPORT OF FIVE CASES OF RESECTION OF THE ILEUM.*

BY THOMAS A. ASHBY, M.D.

PROFESSOR OF DISEASES OF WOMEN, UNIVERSITY OF MARYLAND. BALTIMORE, MD.

In the course of any operation within the abdomen the surgeon may encounter various forms of intestinal complications. These complications may vary from a simple adhesion to an extensive destruction of the bowel necessitating resection of an entire segment.

The most common lesions are intestinal adhesions which attach the bowel walls to each other or to adjacent structures. These adhesions usually result from attacks of peritonitis, both local and general. They are often associated with fibroid, ovarian and other forms of intra-abdominal tumor. Tubercular peritonitis gives rise to the most extensive agglutination of the bowels among themselves. Pyosalpinx may extend to the rectum, sigmoid flexure and ileum, and so completely destroy the bowel as to necessitate a resection. The pus sac may rupture into the bowel at one or more points and establish drain canals with the intestinal tract. These are the gravest forms of bowel lesion and require radical procedures for their correction. Any effort made to remove the pus tube and infected tissue within the pelvis should deal with the damaged bowel wall on radical principles. Resection of the bowel should be made if the lesion is extensive. This method enables the surgeon to remove all of the infected material within the pelvis, and to establish a better communication between the resected ends of the bowel than can be secured by suturing the fistulous openings in the infected bowel wall.

In dealing with such conditions everything will depend on the character and extent of the bowel lesion. Adhesions may be slight, superficial or dense, and must be dealt with from the standpoint of the structures involved. Slight adhesions may usually be overcome by gently separating the attached surfaces with the index finger. When this does not overcome them they should be drawn apart and carefully divided with a scalpel or scissors.

When the bowel is attached to a fibroid or ovarian tumor a portion of the sac wall should be dissected off and left attached to the bowel. The denuded surfaces should be closed in with suture and be made to strengthen the walls of the bowel. Pus sacs attached to the bowel should be dealt with in a similar manner when it is possible to dissect off a portion of the sac wall and to cover in exposed surfaces. An effort should be made, whenever possible, to close in bowel lesions by covering the peritoneal layer with tissues borrowed from the adjacent structures, the object being to preserve the integrity of the intestinal tube. Small openings made by pus sacs, incised or lacerated wounds and denuded surfaces of the peritoneal layer can be closed in by carefully suturing the area of damaged intestine. The success of this work will depend largely on the care with which it is done and on the condition of the bowel itself. If the bowel walls are already seriously infected grave danger threatens the bowel lesion. If the bowel walls are healthy, a careful suturing promises good results.

In dealing with infected conditions the surgeon must estimate the chances of non-union and leakage from rapid extension of the infected area. Abdominal drainage should be provided in advance for a possible leakage in this class of cases. I am sure I have saved more than one patient by having a drain canal provided for a leaking bowel which broke down after closure in the manner previously indicated.

Fecal fistulæ following abdominal operations are not uncommon, nor are they necessarily fatal lesions. I have had them occur in some seven cases, all of which recovered but one. Drainage was used in all of these cases. When the bowel is tied up in the tumor mass to such an extent as to prevent a removal of the tumor without serious damage to the bowel, the surgeon should either abandon an attempt to remove the tumor, or he should resect the bowel and remove the tumor. The latter procedure should be instituted if the resection can be done with a reasonable promise of success.

Accidental wounds inflicted on the bowel in the course of an abdominal operation present, as a rule, the simplest problems connected with bowel lesions. They may be incised or lacerated, and may involve either small or large areas. The lesion may be confined to the peritoneal coat or may extend through all three layers. The condition of the bowel should be carefully examined and the wound should be closed whenever possible by suturing the peritoneal and muscular layers with a continuous catgut or silk suture. The peritoneal surfaces should be neatly approximated by rolling them in longitudinally, in the case of a long incision, or by a purse-string-suture when a small puncture has been made.

Extensive wounds may require a resection of a part or of an entire segment of the bowel: In dealing with this class of wounds care must be exercised in adjusting the suture, not to narrow the lumen of the bowel to too great an extent.

In bowel lesions, whether great or small, the aim of surgery is to preserve the integrity of the bowel. A bowel should not be resected as a matter of choice. Well-pronounced indications should be present to warrant so radical a procedure. In looking for such indications one may fall short of or overstep a conservative position. In an attempt to patch up a bowel lesion it is possible to leave behind a condition of the bowel wall which will lead to results far more disastrous than a resection. The fear of a resection has, no doubt, led to much incomplete work in connection with intra-abdominal conditions in which the bowel was involved with such conditions. It has led to the abandonment of tumors in part or as a whole, which could have been removed by resecting the bowel or by dissecting off the bowel from its attachments. When such tumors have been enucleated and bowel lesions have resulted, too little attention has often been given to the condition of the bowel and to a careful correction of such lesions. In this manner conservatism has been anything else but conservative.

Unless the surgeon is prepared to deal with intestinal lesions associated with intra-abdominal conditions, he must either continue to do a considerable number of incomplete operations, or must overlook grave intestinal lesions which may jeopardize the results of his work. One can not honestly fall back on the records of death from bowel obstruction and septic or general peritonitis following celiotomy, and prove in any number of cases the absence of bowel lesions in such cases without a post-mortem investigation. We should take poor comfort from such indefinite causes of death. Symptoms

*Presented to the Section on Obstetrics and Diseases of Women, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

are not etiologic factors. Intestinal obstruction, intestinal leakage and septic peritonitis are very closely related conditions in their etiology, and may often be traced to bowel lesions overlooked, disregarded or treated in a very hesitating way. The light was very imperfectly thrown on the condition of the bowel; it was left to chance or to nature's reparative forces. In a few hours the overlooked condition reveals itself in the symptoms which follow.

Minor lesions of the bowel are more apt to escape notice and attention than those of a graver character. It is not, however, the purpose of this paper to treat of minor conditions, as important as they are. I wish to call attention to those extensive lesions of the bowel which require a resection and an end-to-end approximation, with a view of showing that good results can be gotten in this class of cases which only a few years back were regarded as practically incurable. It seems to have been my misfortune to have had a larger series of cases requiring resection than usually falls to the lot of the abdominal surgeon. I am frank to say I have not invited such conditions, and if I except Case 1, am not responsible for the lesion which necessitated the resection of the bowel in any of my cases; they have occurred in connection with my abdominal work. If any criticism can be attached to the resection, it should apply to the indications calling for the resection and not to the general results. It might be shown that a more skillful operator could have saved one or more of these cases by a less radical procedure than was employed, but I must claim, in my own defense, that I could not have secured as good a result by any other method. In this claim I think we have the strongest argument in support of independent methods of work and of the personal equation of the operator. The claim can have little value in the absence of results favorable to the methods employed. To have saved four cases out of five in this series is not a record for self-congratulation, but a fortunate demonstration of the value of a simple mechanical appliance which, in the hands of any skilful surgeon, will yield as good results as were obtained in this series of cases.

It is my opinion that it is possible to save from 90 to 95 per cent. of cases if the resection is done on a healthy bowel, or when the infected portion of the bowel can be removed by the resection. The main element of success is in approximating the resected ends of the intestine with such neatness that the opposing surfaces of peritoneum are placed in the best conditions for union. This can be done if the bowel is free from attachments to the pelvic walls, and is not infected beyond the lines of union. In Case 4, which died, the distal portion of the intestine was tied down in the pelvis and the entire area of infection could not be removed. The bowel gave way at the mesenteric border, because a neat approximation could not be made. A small slough occurred at this point and leakage took place. The patient was also suffering from general systemic infection at the time of the operation which, apart from the bowel leakage, was sufficient to destroy life.

In Case 5 a leakage occurred and a fecal fistula was established, but the button kept the ends in approximation and escaped with perfect safety into the rectum. There was no systemic infection whatever in this case.

The value of the Murphy button resides in the ease and rapidity with which it can be applied. The resection and approximation can be made within from five to ten minutes. The element of time is an important consideration when the resection is done in connection with an extensive intra-abdominal operation, as was the case in this series of cases. The after-results were not of an alarming character in the cases which recovered, after the shock of the operation had subsided. Intestinal disturbances were not marked; liquid food was given after forty-eight hours. Nausea and vomiting were not present after the effects of anesthesia had worn off; the abdomen was not distended from flatus and no symptoms of obstruction or of peritonitis were noticed. The bowels usually moved spontaneously after the third or fourth day. The button remained in the rectum in each case until removed by the finger. Search was made for it daily after the first week.

End-to-end anastomosis with suture is the ideal operation when a primary resection is made. It requires a higher degree of skill and a more elaborate technic. From the standpoint of the surgeon it is a more brilliant procedure. Whether it can show a larger percentage of recoveries in the class of cases reported in this series I am unable to determine, as statistics bearing on this point are not accessible. In a pure and simple end-to-end anastomosis for bowel lesions not associated with intrapelvic operations, the surgeon has ample time to prepare for a resection, and is favorably circumstanced for plastic bowel surgery. He should be able to secure a perfect coaptation of the serous surfaces by the aid of suture material. A healthy union is thus favored, and the anticipated dangers of a foreign body in the intestine are removed. The highest art of surgery is thus made possible. The ideal operation has been practiced.

With the button anastomosis approximation is secured by a clamping process in which a large foreign body is left within the intestinal canal. The behavior of this body is an uncertain element when viewed from a mental standpoint. A sense of insecurity rests with the surgeon from day to day until its fate has been determined by its escape into the rectum. This mental picture, so disturbing to many operators, presents many imaginary dangers. In point of fact the behavior of the case is a true index of the intestinal condition, and so long as this is favorable we may lay aside anticipations and await results.

The criticism that intestinal lesions occur in the form of cicatricial narrowing of the lumen of the bowel after recovery from the button operation has no force, so far as I can determine, in this series of cases. The button operation has been condemned as unsurgical by some who practice the end-to-end approximation with suture, on the ground, I take it, of its great simplicity and ease of application. If this view is correct, surgery is retrograding instead of advancing, for the full aim of surgery should be to simplify and perfect every line of procedure that promises the best results.

So far statistics can throw very little light on the relative merits of these two methods as practiced by different surgeons. Larger series of cases and associated conditions complicating the resection must be considered before a correct conclusion can be reached. It is encouraging to know that better results in intestinal anastomosis are now possible by both methods, and the surgeon should not fail to employ the one or the other in all cases of intestinal lesion requiring a resection. He should learn to deal with the intestinal tube as with any other organ or structure requiring surgical treatment.

The possibilities of intestinal surgery have been fully demonstrated. The trained surgeon must at all times be

prepared to deal with all forms and conditions of bowel lesions on sound surgical principles.

RESECTION OF THE BOWEL.

End-to-end anastomosis is the most common method now employed for restoring the continuity of the bowel when resection is done. Several methods are employed for connecting the divided ends of the bowel. One consists in using suture and the other in using a mechanical appliance known as the button. These two methods differ materially in technic, but they practically accomplish the same result.

When a resection is done for primary conditions, the end-to-end anastomosis with suture is perhaps the preferable procedure. When the resection is done in connection with the removal of other intra-abdominal procedures, such as hysterectomy, ovariotomy or pus tube, the button operation possesses a great value in the rapidity with which the resection can be made. Time is an important element when a patient is already shocked by a tedious operation. The Murphy button can be introduced in a space of five or ten minutes. The anastomosis with suture requires from twenty to sixty minutes. I have used the Murphy button in all the cases of resection I have made, with the most satisfactory results.

END-TO-END ANASTOMOSIS WITH SUTURE.

The bowel is resected straight through so as to present an even edge for accurate approximation. It should not project beyond the mesentery. Sutures are laid about one-twelfth of an inch apart and in a straight line around the bowel. Each suture is made to penetrate but not to perforate the fibrous layer of the intestine close to the margin. All the sutures are put in place before a single one is tied. The mattress suture, introduced by Dr. Halsted of Baltimore, presents the best method of approximating the serous surfaces. To secure an accurate apposition, an inflatable rubber cylinder is first introduced into the bowel so as to distend it to its normal caliber.

The mesenteric border is first brought together and neatly approximated. The mattress sutures which have been introduced around the bowel are now brought together and carefully tied. Before the last stitches are tied the air is let out of the inflated cylinder and it is withdrawn. The remaining stitches are now tied. The success of this procedure depends on the great care which is given to the passage of the suture and to the perfect approximation of the serous surfaces.

RESECTION WITH MURPHY BUTTON.

The bowel is resected at the point selected for end-to-end approximation. The resected ends are held in clamps placed one inch distant from the incised ends. A purse-string-stitch is now carried round the divided end of the bowel, so that the two ends of the stitch are brought together at the point farthest from the mesentery. The stitch should be accurately placed and should embrace the mucous, muscular and peritoneal layers of the bowel. One-half of the button, held in forceps, is introduced into the bowel, which is now drawn closely around the button until it is smoothly adjusted. The other end of the bowel is treated in the same manner. The two ends of the button are now adjusted, and as they are made to approximate, care must be taken to secure a perfect involution of the mucous surfaces, so that only serous surfaces are exposed. The button is next made to clamp the ends of the bowel evenly and firmly, so that a perfectly smooth surface of the serous surfaces is brought into coaptation. The mesentery is next united with catgut so as to secure a closure of all exposed surfaces and proper union of the mesentery along the bowel. Care should be taken not to strip the mesentery along the bowel at any distance from the points of approximation; otherwise the nourishment of the bowel might be cut off, which would occasion sloughing at the line of proposed union.

In resecting the bowel all injured or infected portions should be removed so as to approximate healthy bowel tissue. The bowel should be carefully dried and replaced in the abdomen. The abdomen is next closed as for celiotomy.

End-to-end anastomosis with the Murphy button is employed to the best advantage in cases requiring rapid work, and when the resection is made necessary in connection with intrapelvic conditions in which the intestinal lesion is associated with the removal of other intrapelvic conditions. Resection of the bowel should follow after the removal of the primary condition.

End-to-end anastomosis with suture is the ideal operation for primary conditions of the bowel. It requires a most careful technic and is usually too slow in its steps for general adoption in cases requiring other operative procedure within the pelvis.

The following cases will illustrate the value of the Murphy button in end-to-end anastomosis when resection of the bowel was made necessary by the complications associated with intra-abdominal operations.

CASE 1.—Mrs. M., aged 21, primipara, was admitted to the Maryland General Hospital in the fall of 1895. She stated that seventeen weeks previous to her admission she had given birth to a child, in normal labor. Since the birth she had suffered from severe backache and intrapelvic pains, and had been reduced to such a degree of invalidism that she had left her home in western Pennsylvania to enter the hospital.

The physical examination showed a large retrodisplaced uterus and extensive bilateral laceration of the cervix, with a mucosanguinolent discharge from the uterus. The condition indicated an arrested involution of the uterus following a bilateral tear of the cervix, with retention of placental debris in the uterine cavity.

She was placed under anesthesia with a view of correcting the displacement of the uterus and of repairing the cervix. In the examination which followed, a sound was passed into the uterine cavity which detected the presence of a soft boggy mass in the uterus. The withdrawal of the sound was followed by a copious flow of bloody and serous fluid. It also brought on a firm contraction of the uterus. I at once dilated the cervix and passed in a curette to remove the uterine mass, but found little tissue that was removable. I next passed in the blades of a long placental forceps, thinking I could grasp the mass and empty the uterus. Withdrawing the forceps I discovered in the grasp of the blades a mass which I at once saw was a loop of the small intestine which was forced down into the vagina by strong uterine pains. Examining the intestine I discovered that it had been torn by the blades of the forceps and that it would be unsafe to return it into the abdomen. I recognized that I had not only to deal with a wounded intestine but with a ruptured uterus. The patient was at once prepared for an abdominal section. After opening the abdomen I found a large tear in the fundus of the uterus, filled with the intestine, which was now carefully drawn back into the abdomen, examined and placed in warm towels. In the abdomen I found large clots of blood and a fetus about 2½ to 3 inches in length.

An examination of the uterus showed that it would

not be safe to leave it. I at once removed it by a supravaginal hysterectomy. The intestine was again examined and in several places was so seriously wounded that I decided to resect it. I removed eight inches of ileum about one foot from the ileocecal valve and brought the ends into approximation with a Murphy button. The abdomen was next closed and the patient put to bed. She made an uneventful recovery and left the Hospital some five weeks subsequent to the operation. The button was removed from the rectum on the eighteenth day.

A careful examination of the uterus after its removal showed that this woman was about ten weeks' pregnant with an abnormal gestation. The fundal portion of the uterus was abnormally developed and greatly thinned out. In the introduction of the sound violent pains had been stimulated, and the uterus had ruptured at the fundus, expelling the fetus into the abdominal cavity. The intestine at once fell into this opening, and when I passed the forceps into the cavity I caught the intestine in the blades. I have not been able to see how I seized the intestine in any other way, as my manipulations were guarded and the instrument did not seem to me to penetrate deep enough to have gone through the rupture into the abdomen. On this point I can not be positive. Whatever the condition was, I was forced most unwillingly to deal with a ruptured uterus and with a wounded bowel. Any other line of action, after the condition of the patient was made known to me, would have led to the death of the patient.

CASE 2.—Mrs. L., aged 30, multipara, first came under my care in December, 1894, suffering with an enormous pelvic abscess and pus sac, which I removed after a very trying operation, but I was compelled to leave a small portion of the sac wall behind. She recovered from the operation and enjoyed excellent health for several years.

In the fall of 1896, she noticed a rapidly growing intra-abdominal tumor in the location of her first one, and at once came from her home in West Virginia and placed herself under my treatment. On examination I found a large cystic tumor filling her pelvis and extending well up into the abdomen.

An immediate operation was advised. The patient was sent to the Union Protestant Infirmary, where, with the assistance of the resident physician, Dr. Dunot, I performed an abdominal section. I found a large cystic tumor densely attached to adjacent structures at almost every point. It was adherent to the omentum, small intestines and uterus by such a firm union that I was forced to remove the entire uterus and to resect five inches of the ileum. The bowel could not be dissected from the tumor mass and was disconnected in attempts to remove the sac walls of the tumor. The ends of the ileum were approximated with a Murphy button. Both abdominal and vaginal drainage were employed, and the abdomen was closed.

This patient was greatly shocked by the length and severity of the operation, but made a complete recovery.

In the use of the vaginal and abdominal drain a fistulous opening was established in the rectum, which for some days discharged feces through both drain canals. Water injected into the rectum would flow through both the abdominal and vaginal drain. The opening closed spontaneously, and the patient made an uneventful recovery. The button was removed from the rectum on the twenty-fifth day[1].

[1] Since writing this paper I have learned of the death of this patient in January, 1899, but have been unable to learn the cause.

CASE 3.—Mrs. J., aged 25, and mother of one child, gave birth to her second child early in the month of April, 1897. She was delivered at her home in Orlean, Va., by her family physician, Dr. R. C. Buck. Her labor was normal and her condition apparently good until a few days after her confinement, when a small cystic tumor was discovered in her abdomen. This tumor increased rapidly in size within the next two weeks and the patient began to develop symptoms of intestinal obstruction. Nausea and vomiting were incessant, and no movement could be obtained from her bowels. She emaciated very rapidly and was hourly losing ground. Dr. Buck telegraphed me to come to Orlean immediately, to do an abdominal section. I made a very hurried preparation and reached the village at 10 o'clock at night after a ride of over 100 miles by rail and twelve of rough mountain road. I saw the patient before retiring for the night, and arranged for an early operation the following morning.

Her condition was very critical, but she had one faculty left which inspired me with hope. She was high-tempered. She informed me with a very strong and determined voice that she would sooner die than be "butchered," but she finally yielded to argument and became as plucky as she had been obstinate.

The surroundings were not of a character to inspire confidence in an operator. The house was small and the kitchen had to be used as the operating-room. The kitchen table, 5x9 feet, was pressed into service and the patient, vessels and assistant all occupied positions on it. Everything was made as clean as hot water could make them. There was the greatest abundance of pure hot water at my command and I made free use of it.

These details are mentioned to show what difficulties the surgeon must be prepared to cope with in country work, and as an encouragement to men who think an elaborate technic essential to success in abdominal surgery. I had one assistant who had never aided in an abdominal operation, and a country merchant as a second assistant. A colored woman boiled the hot water and placed it in bowls and wash-tubs as I called for it. A young physician living five miles distant came and gave the anesthetic.

The physical signs indicated the presence of a large ovarian cyst, which by pressure had given rise to intestinal obstruction.

After the section was made the tumor was drawn through the incision and tapped. The contents of the sac had the appearance and odor of liquid feces. The tumor had no connection with the uterus or ovaries, but was a part and parcel of the small intestine which drained into the sac. Its only pedicle was the ileum. It had performed the function of a reservoir for the fecal matter and was just on the eve of rupture from overdistension when removed. It became necessary to resect five inches of the intestine to remove the mass. Fortunately I had a Murphy button in my pocket, which made the approximation of the ends of the bowel a simple procedure. This patient made a slow recovery but is now living and in good health. The button was removed on the thirty-fifth day.[1]

CASE 4.—Mrs. ——, aged 35, widow, was admitted to the University Hospital in the fall of 1897. She gave a history of a long-standing intrapelvic inflammation. Her present condition indicated an acute attack of pus formation and general intrapelvic inflammation. The physical signs showed the presence of a large en-

[1] This patient has recently given birth to her third child.

cysted pus collection all around the uterus and filling up the entire pelvis. Her symptoms demanded an immediate abdominal section. The patient was prepared for an abdominal operation, and celiotomy was done in the amphitheater before a class of students.

The condition within the pelvis was complicated with a general infection of the peritoneum. Two large pus sacs were bound up in dense adhesions, which attached them to the uterus, omentum, pelvic walls and small intestine. It was with the greatest difficulty that the sac walls could be detached from the surrounding structures, but after careful dissection I succeeded in removing the sac walls and in clearing out the pelvis. The ileum was intimately attached to the sac wall, and was perforated at several points with drain canals, which had discharged pus into the intestinal canal.

It was necessary to resect over six inches of the bowel before two suitable ends for approximation could be secured. The peritoneal layer of the bowel was already inflamed, and I had grave doubt of success from an end-to-end approximation, yet it was the only procedure I could adopt in her case.

The ends were cut off as far away from the diseased portion of the bowel as I could get. The distal end—that next to the colon—was tied down in the pelvis by adhesions, and I was forced to place the button in the pelvic fossa. The abdominal gauze drain was packed into the pelvis to wall off the intestine from the infected area, previously occupied by the pus sacs, and also to provide for the escape of leakage in case of a break in the bowel at the point of apposition. The entire operation lasted over two hours, and the patient was greatly shocked when taken off the table. For forty-eight hours her condition seemed favorable. After the second day symptoms of general peritonitis and of septic infection set in, and she died on the fifth day.

A post-mortem was made to recover the button, and to determine the condition of the bowel. The abdomen and pelvis were filled with a serous exudate. The entire peritoneum was infected. At the line of approximation a small break in the bowel had occurred from sloughing. A fecal fistula had been made at this point. The button was *in situ* and union had occurred all around, except where the fistula had formed. The patient died from septic peritonitis.

Case 5.—This case is one of unusual interest from a number of standpoints. During the first week in September, 1898, a bright mulatto girl, 18 years of age, was admitted into the University Hospital with the history of an acute gonorrheal infection. According to her statement her illness began the week prior to her admission. At the time I made my first examination she was in the midst of an acute salpingitis and general pelvic peritonitis. The physical signs showed a large cystic mass which completely filed her pelvis and extended well up above the pelvic brim. The tumor mass was tense, boggy and firmly fixed. Her symptoms demanded an immediate abdominal section. Preparation was made and the abdomen opened at my regular clinic hour, on October 5.

I found the intrapelvic organs a perfect mass of adhesions. The uterus, tubes, ovaries and a large coil of the ileum were tied up in such confusion that it seemed next to impossible to untangle and enucleate the mass. Pus had burrowed in every direction, and was in free communication with the intestines. The greater portion of the tumor mass was made up from coils of the bowel, which had gotten down in the pelvis behind the uterus, and was attached to the pus tubes at every point. After a long and careful dissection the bowel was liberated from the incarcerated mass and drawn up out of the pelvis. It was folded up in the sterile towels and held out of the way until the diseased tubes and ovaries could be removed. After the toilet of the pelvis had been carefully made the bowel was examined with more care, and it was found necessary to resect twenty-six inches of the ileum. The end-to-end anastomosis was made with a Murphy button. The pelvis was then packed with a large gauze drain, and the abdomen closed around the drain canal.

The patient was on the table over two hours and was greatly shocked by the operation. Her condition for twenty-four hours was very critical, but after this she rallied from the shock, and at no time since showed an alarming symptom. The abdominal incision was infected from the pus, which unavoidably leaked out during the operation. This led to an extensive cellulitis and made the reopening of the wound necessary, as far down as the peritoneal layer. The gauze drain was removed after the fifth day. A fecal fistula was then discovered opening into the drain canal. Constant irrigation and repacking of the drain canal was kept up, and no trouble followed this condition. The patient's bowels moved regularly, and liquid nourishment was given forty-eight hours after the operation. Solid food was allowed after the second week. The button was removed from the rectum on the twenty-fifty day.

Of this series of five cases, four have recovered and as far as my information goes, are living at the present time. Case 1 has not been heard from for two years; when last heard from her health was good. Case 2 is living in Baltimore and has had no complications growing out of the resection of the bowel. I have seen her within the last thirty days.[2] Case 3 was living and in vigorous health when heard from less than six months ago. Case 5 is of too recent date to present a history of complications. The criticism urged against the Murphy button, that it leads to stenosis of the lumen of the bowel at the site of union and to intestinal obstruction, does not, up to the present time, apply in this series of cases.

SOME CLINICAL OBSERVATIONS IN RECTAL DISEASES.*

BY B. SHERWOOD-DUNN, M.D.

Officier d'Académie; National Delegate to the International Gynecological Congress, Amsterdam, Holland, 1899.

BOSTON.

There is no surgeon of much experience in rectal surgery but has encountered from time to time cases of

PRURITUS ANI

that defied all his efforts for relief. I have lately discovered, in several of my cases, a cause for chronic pruritus, which has heretofore escaped my attention, and may possibly not have been observed by others. I therefore speak of it in the hope that it may be a source of enlightenment in many cases that have perplexed physicians. I refer to the discovery—in three late instances—of a small superficial ulcer placed between the internal and external sphincters, showing on the posterior surface, but which may be also sometimes found on the anterior surface of the gut, and in the latter situation is very likely to be unnoticed. When one is at a loss to account for any case of pruritus ani, I would therefore advise that this little ulcer be looked for. I call it "sim-

[2] See foot note, p. 1194.

*Presented to the Section on Obstetrics and Diseases of Women, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

ple ulcer of the rectum," because of the fact that its borders are only slightly elevated, and the ulcer itself presents only a very small, minutely-granulated surface, and may easily escape the tactile sensation when the surgeon makes a rather hasty examination. It needs to be looked for carefully. Many physicians, in examining the rectum pass the index finger high up in the bowel, whereas the ulcer which I am describing is situated inside the first two inches from the anus, or, to be more exact, is always to be found between the internal and external sphincters. It takes very little experience to be able to differentiate between the ordinary smooth mucous membrane and the roughened surface presented by this small ulcer. There is always a certain amount of discharge from it, which is very liable to be overlooked because of the excoriated condition of the external anal borders—arising from the patient's rubbing and scratching the parts, which causes a certain amount of sweating from this irritated external surface—and which condition is liable to cause the examiner to overlook the possibility of an internal, minute discharge. It is unnecessary to say that no amount of local treatment will cure the pruritus until this cause is discovered and treated.

I will only say in addition that if one wishes to make doubly sure as to the presence of this local ulcer, it can be seen by passing an ordinary rectal speculum, remembering always, however, that as the speculum is passed into the bowel, the tissues are pressed upward and displaced from their normal position, and one must allow for this displacement when searching for the ulcer; also this stretching of the tissues causes the base of the ulcer to bulge, and, as a rule, the lower border is higher than the upper, and hides the base of the ulcer from view, and it is well to press down the tissues with a small probe or sound and examine the surfaces in their complete continuity. The livid color of the ulcer as compared with a healthy mucous membrane is another point of recognition, and it is rather prone to bleed; and in this event the simple wiping of the surface with a pledget of cotton exposes a small spot denuded of its normal covering.

This ulcer should be treated in the same manner as all rectal ulcers. It is hardly necessary for me to go into a discussion of this part of the subject, except that I might say that in cases where I can not give radical treatment, and the patient must visit me at my office, I deaden the field by the use of a 4 or 5 per cent. solution of cocain and apply pure lactic acid spread on cotton wool to the surface of the ulcer. This turns the ulcer a brownish color. After allowing to remain for a moment or two, I wipe away the surplus acid with dry cotton wool, ordering the patient to inject, with an ordinary syringe, two ounces of a 25 per cent. solution of hydrogen dioxid morning and evening, and, if possible, directly after each movemet of the bowels.

RECTAL ULCERS.

I know of nothing in surgery that is more difficult of treatment than rectal ulcers. It is necessary at the outset to persuade one's patient that he is liable to a great deal of annoyance and trouble, and must have infinite patience if he is not in a position to enter a hospital and submit himself to radical curative measures.

To those who see these cases in the dispensary practice of the out-patient clinic of the charity hospitals, I would cite one or two instances that have come under my observation, which have taught me to give more than ordinary attention to patients complaining of symptoms referable to the rectum, and may persuade my hearers to be careful as to how they temporize in many of these cases.

During my service at the Broca Hospital, Paris, there came to the out-patient department a young woman suffering from pruritus ani, which on examination, I decided was caused by a fissure I found present, and in the press of examining the many patients in attendance I prescribed a lotion and ointment, and told her to come the following week to report and have a renewal of her medication. Two weeks after this one of her neighbors came for more medicine, bringing the girl's card and saying she was too ill to come herself. I elicited a sufficient history of the girl's symptoms and condition to persuade me that she should be brought for examination, and I gave the woman money to hire a cab and return with the girl. On her arrival I found she had a temperature of 102.5, rapid pulse and heavily-furred tongue, with a history of several days since the last movement of the bowels. On examination I found a double ischiorectal abscess with widespread external inflammation. The abscess on one side, which had pointed, was opened on the examining-table, and several tablespoonfuls of most foul-smelling pus evacuated. The girl was then placed in one of the wards and the following day the abscess on the opposite side was freely opened. Both cavities were curetted, washed out aseptically and packed with iodoform gauze, and while under an anesthetic a complete rectal examination was made. A not very large ulcer was discovered above the internal sphincter, which, by gradual process, had formed sinuses that gave rise to bilateral abscesses, and the serious condition in which the girl was at the time of her admission. At the end of one month's daily treatment, the patient was discharged, but was re-admitted six months later for treatment of a fistula that remained from one of the external openings of one of the abscesses, and was discharged cured three weeks later.

The other patient was a woman 42 years of age, who was treated for about a month, for pruritus, which was supposed to be caused by a local fissure; then for about two weeks the patient absented herself from treatment, and at the end of this time came to the hospital in a cab, with an enormous ischiorectal abscess, which I freely opened the following morning, when I found that it arose from an opening in the bowel fully six inches up. The temperature immediately fell to normal, and the patient rapidly recovered. I kept the large free opening made into the abscess open for several days, by means of packing, while I had made a flexible wire curette with which I scraped the walls of the sinus with one finger in the bowel, and later with the hand of an assistant externally on the abdomen, pushed the bowel downward. Free liquid movements were maintained by saline cathartics, and this patient left the hospital at the end of six weeks.

I call attention to these two cases to show that there may be serious trouble back of a fissure that may cause a tormenting condition of pruritus, and to emphasize the necessity of giving more than ordinary attention to the examination of cases that come to us complaining of symptoms localized to the rectum alone.

I will cite one more case which is interesting because of the rapid recovery of the patient, following a new line of treatment adopted in this instance. The patient, a male aged 43, came to the office complaining of a boil on the buttocks. On examination I found a small suppurating point located about one inch from the anal opening, which exuded pus freely on pressure, was exceedingly sensitive, and tender, the external surface showing a widespread inflammation, with absence of local induration, showing the presence of an abscess.

rather than a boil, as the patient had described. I told him my suspicions, gave him directions to completely empty the bowels, and confine himself to liquid diet. Three days after I gave him a careful examination under an anesthetic, having made all the necessary preparations to operate. I found a small ulcer just below the internal sphincter, and readily discovered, by the aid of a probe, that it gave rise to a sinus, which I freely opened into the bowel in the usual manner, thoroughly curetted the abscess cavity and the fistulous tract, carefully washed it out with pure hydrogen dioxid, and, commencing just above the superior border of the ulcer in the bowel, with large-sized catgut carefully stitched the incised parts together with continuous suture, carrying the sutures sufficiently deep to incorporate all of the parts separated as it came to the external opening. With the aid of a speculum I packed the bowel with strips of iodoform gauze, constipated the patient by the use of opium, and for five days allowed nothing but concentrated liquid food and a small quantity of acidulated water. The sixth day the first suture beyond the anus separated, and careful examination showed that the parts were healed by first intention. I removed the gauze and thoroughly cleared out the bowel by the aid of Husband's magnesia and hot lemonade, which, by the way, I have found the most satisfactory of all forms of purge for all abdominal operations, as it invariably gives thoroughly liquefied stools from the very first. At the end of the sixteenth day this patient was out of bed, and in three weeks was dressed and out of doors.

419 Boylston Street.

ON THE RELATION OF DISEASES OF THE ACCESSORY CAVITIES TO DISEASES OF THE EYE.*

BY J. H. BRYAN, M.D.

WASHINGTON, D. C.

The relation between the diseases affecting the accessory sinuses of the nose and those of the orbit and its contents is such an intimate one that it seems strange so little has been done in the past in the way of clearing up the hazy ideas that have hitherto existed as to the influence of diseases of these pneumatic spaces on diseases of the eye. Indeed, in the ophthalmologic handbooks and text-books of to-day, very little on the relation of orbital diseases to the suppurative affections of the accessory cavities has been written, authors contenting themselves with a brief mention of some of the more decided orbital complications which have their origin in the pneumatic cavities.

This is the first time in America, I believe, that a joint meeting between the rhinologists and ophthalmologists has been held with the view of jointly studying these oftentimes very obscure and serious affections. I feel such a discussion can only be followed by the best results, for there is no region where so much depends on the harmonious action of the two specialties in order that the patient may be relieved from intense suffering, an eye preserved, or a life saved.

It is probably a matter of assurance to many of us that, if a better understanding of these diseases had only existed, cases of so-called supraorbital and infraorbital, or optic neuralgia would not have been treated so long without benefit, some of which have gone to the verge of excision, only to find the nerves were not the seat of the disturbance, but that one of the cavities adjoining the nose was the source of the trouble.

The eye, partially surrounded by the accessory cavities whose thin walls go to make up the walls of the orbit, is very sensitive to any pathologic condition that takes place within them, and presents symptoms in many instances which, when carefully considered, will enable the surgeon to definitely locate the source of the disease. It is my custom to submit all such cases, no matter how trivial they may at first appear, to a most searching ophthalmologic examination. In this way I have been able to locate some obscure affections of the accessory sinuses, which would have been most difficult to recognize by rhinoscopic examination alone.

It is to Dr. W. H. Wilmer and his assistant, Dr. Greene, who have made most of the ophthalmologic examinations of my cases, my thanks are due for the painstaking care which they have practiced in making the searching examinations that such cases require.

Several of the cases I propose to briefly mention in this paper have been previously reported to the American Laryngological Association, but short abstracts will here be made of them in order to illustrate some of the points I desire to elucidate.

As in diseases of the nose, the affections of the frontal sinuses are frequently accompanied by ocular reflex disturbances; but they are frequently overlooked because of the difficulty in making a diagnosis of the diseased condition of the sinus. The reflex symptom most frequently observed in diseases of the frontal sinus is above all neuralgia of the supraorbital nerve, and it is present in both the acute and chronic forms of inflammation affecting the cavity. It occasionally happens that this symptom has been present long before the characteristic secretion makes its appearance in the nose. This neuralgia is not always constant but frequently occurs at regular intervals, and it does not always correspond to the diseased area, but may radiate to the parietal and temporal regions of the affected side. I have also occasionally noticed it to extend to the opposite side. This is probably one of the most frequently misinterpreted symptoms, puzzling not only the general practitioner but the specialist also. When we take into consideration, however, in the majority of cases of frontal headache either constant or intermittent in character, that there are other evidences of sinus disease, such as pain on pressure above and below the supraorbital ridge, especially at the inner angle, accompanied by a unilateral discharge of mucus or pus from the corresponding nostril, it seems difficult to understand why its true significance should not be more frequently understood.

The frontal sinuses vary in size to a great degree in different individuals. After an examination of 120 skulls, Herbert Tilley found the sinus large enough in some instances to contain an ordinary bean, while in others it was ten times as large. He considers a sinus normal where it measures 28 mm. from the median line outward, and in the vertical extent measured from the nasion from 20 to 22 mm. The size of this cavity, where the seat of a catarrhal or suppurative inflammation which is the most frequent pathologic condition met with, has a very important bearing on the ocular symptoms; much depends also on the depth of its floor, and on the thickness or thinness of its walls.

The secondary changes in the orbit, due to frontal sinusitis, are of the greatest interest, and they may be brought about simply by mechanical pressure, resulting in change of form of the orbit, in a displacement of the

*Presented to the Section on Ophthalmology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

eyeball with a disturbance of its mobility and function, and in an interference with the flow of tears.

Disturbances in the function of the eye of a high degree have been observed in cases of frontal sinusitis, such as dilatation of the pupil and congestion of the papilla, varying in intensity with the degree of pressure; a narrowing of the field of vision, especially for colors, scotomata, and in very severe cases amblyopia or amaurosis. This, according to Kuhnt, serves to bring into prominence the fact that the peripheral and central sight in these cases can be raised up to a certain grade through intense illumination which points not to atrophy, but only to a lowering of the perception and conductibility. Frequently after the removal of the mechanical obstruction caused by the abscess, there is a rising of the central and peripheral sight; changes in refraction toward the hypermetropic and astigmatic side are observed in the cases where the pressure of the dilated sinus wall is made at the equator of the eyeball or on its posterior half. If the purulent secretion is not discharged through the nose, it may result in a diseased condition of the osseous walls of the sinus, causing an ostitis or periostitis of the walls of the orbit, the walls finally becoming so thin that the secretion can be discharged through a fistulous opening in the supraorbital ridge, through a fistulous opening at the inner angle of the orbit where the floor of the sinus is the thinnest, or farther back into the orbit, producing an orbital abscess which is accompanied by all the compression phenomena from the side of the eye.

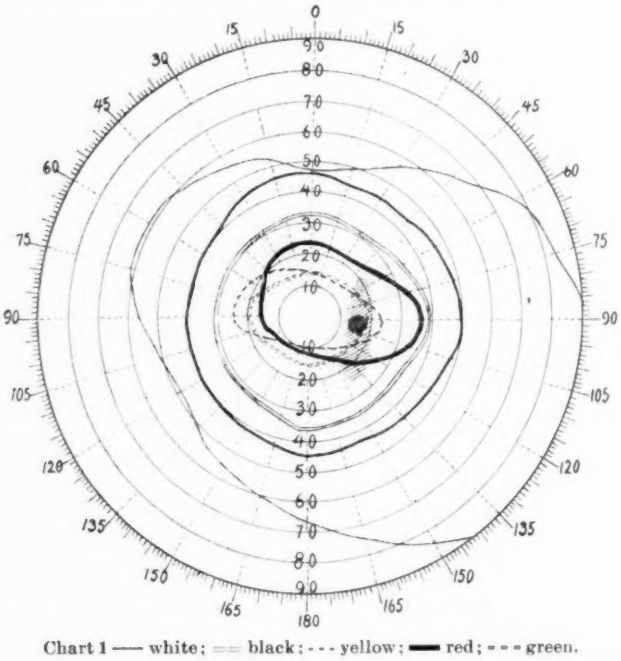


Chart 1 —— white; == black; - - - yellow; ▬ red; - - - green.

Abscess of the orbit is rarely primary. In the majority of instances it is the result of an extension of an inflammation from one of the adjoining sinuses, generally the frontal. The first symptom that shows itself may be the appearance of a small swelling at the inner angle of the orbit, while at other times the phenomena of ocular compression make their appearance, such as lachrymation, pain in the eye, exophthalmus, strabismus, mechanical diplopia, edema with a stretching of the upper lid and, when the disease has advanced to any extent, ectropion. Before the pus has made its outward appearance there may be considerable chemosis which partly or completely immobilizes the eyeball, especially for its upward or downward movements.

The following is a brief abstract of a case of orbital abscess referred to me by Dr. Belt of Washington:

CHRONIC FRONTAL SINUSITIS, CARIES OF THE FRONTO-ETHMOIDAL CELLS, ORBITAL ABSCESS, FISTULOUS OPENING AT THE INNER ANGLE OF THE ORBIT.

CASE 1.—On May 2, 1897, this patient consulted Dr. Belt, after an attack of influenza, for a severe pain in the left eye. At this time the left upper and lower lids were red and swollen, and there was considerable chemosis of the conjunctiva. The eyeball was immovable, owing to the great swelling of the orbital tissues. The swelling increasing, an incision was made at the inner canthus and a large quantity of pus evacuated. A probe introduced into the wound was found to pass into the frontal sinus through a small opening at the inner angle of the orbit. Owing to the very anemic condition of the patient, further operative measures were not deemed advisable until his general health improved.

When I first saw him, Sept. 10, 1897, there was a small fistulous opening at the inner angle of the left orbit, through which pus in considerable quantities was discharging. There was a slight drooping of the upper lid, but no swelling of the skin over the frontal sinus, and no pain on pressure.

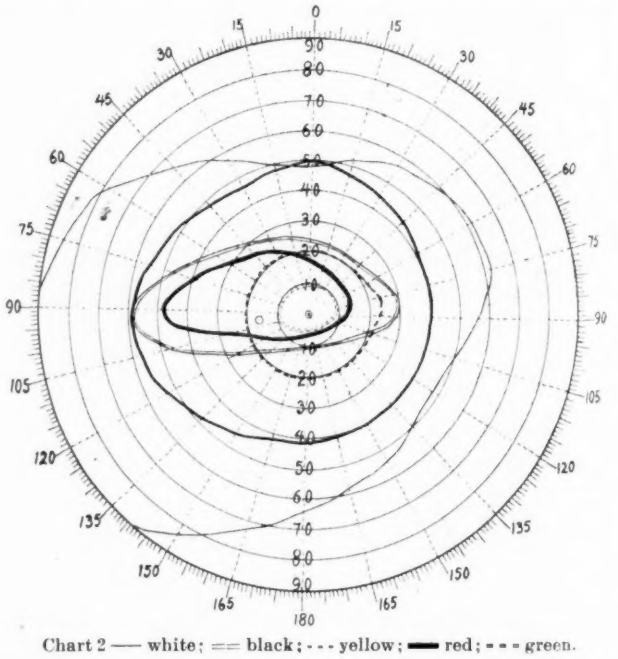


Chart 2 —— white; == black; - - - yellow; ▬ red; - - - green.

The patient was admitted to the Episcopal Eye, Ear and Throat Hospital, September 17, when after shaving the eyebrow and thoroughly cleansing the parts, an incision was made along the eyebrow, commencing just within the supraorbital notch and extending to the nasal boss. After elevating the skin and periosteum, a small opening in the orbital plate of the frontal bone was found, communicating with the frontal sinus. This opening was sufficiently enlarged by means of a gouge and rongeur, to admit of a thorough examination of the cavity, which was found filled with granulation tissue, and also found to be the seat of caries at its junction with the fronto-ethmoidal cells. The sinus was thoroughly curetted, and all granulation and carious tissue was removed. The frontonasal duct being closed, an opening into the nose was made with a trocar, and a self-retaining drainage-tube passed into the nose. The cavity was irrigated with a solution of bichlorid of mercury, 1-3000, the wound closed and hermetically sealed with

iodoform and collodion. The sinus was irrigated daily through the drainage-tube, with a saturated solution of boric acid. At the end of a week, the external wound having healed, the patient was discharged from the hospital, and in ten days, there being no secretions from the sinus, the drainage-tube was removed. This is the form of orbital abscess so frequently met with resulting from a suppurative inflammation in the frontal sinus. It is, however, not always inevitable for a perforation of the walls of the sinus to take place, for in certain cases, in spite of the most minute examinations, we do not find any perforations. Panas has described such cases as *abces circonvoisin*. He believes, on account of the thin walls of the sinus, the process is propagated to the periosteum without any perforation[1].

Points valuable in the diagnosis of orbital abscess resulting from suppurating frontal sinusitis, are the position of the eye, the direction in which the eyeball is pushed, as well as the corresponding immobility of the eye. If the tumor is felt above, or above and internal, and if the eyeball is pushed downward and a little outward, while its movements upward and inward are

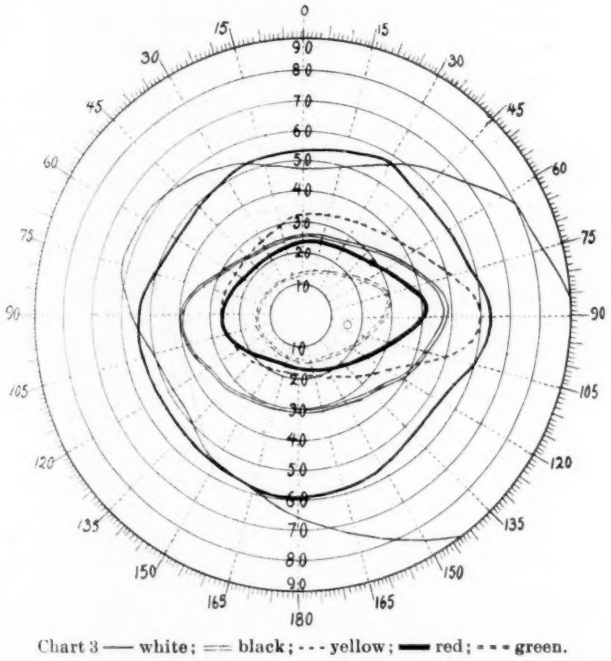


Chart 3 — white; == black; - - - yellow; ▬ red; - - - green.

diminished, it indicates a breaking through from the frontal sinus.

A suppurative inflammation of the frontal sinus, of any severity or duration, in my experience, rarely exists alone, but is usually accompanied by caries of the fronto-ethmoidal and ethmoidal cells. While this complication occasionally gives no evidence of its existence by a rhinoscopic examination, it is much in evidence as soon as the frontal sinus is opened. In such cases the ocular symptoms are increased in severity and render the diagnosis more difficult, for, added to the signs of frontal sinus inflammation are those which are peculiar to the ethmoidal alone. In such cases I have found the visual fields for colors always narrowed, exophthalmus more pronounced than in simple uncomplicated frontal sinusitis, especially so when the lateral and superior pressure is either at or posterior to the equator of the eyeball —the displacement is pronouncedly downward and outward, and its movement inward especially restricted.

[1] Progrès Med., 1890.

CHRONIC FRONTAL SUPPURATING SINUSITIS AND SUPPURATING ETHMOIDITIS.

CASE 2.—This is a very instructive one and illustrates the various disturbances these serious inflammations have on the eye. S. G., aged 15, was referred to me Oct. 26, 1898, by Dr. Wilmer. The patient stated that, while never robust, he had enjoyed fairly good health. He does not recall having had influenza.

During August of the present year, while at the seashore, he was taken ill with what was supposed to be malaria, but which finally proved to be an inflammation of the right frontal sinus. During this illness, in the absence of Dr. Wilmer from the city, he was seen by Dr. Burnett, who kindly gave me his notes of the case at this time:

August 12, there was an enlargement, very hard to the touch, near the right lachrymal region, but superior to the sac, without discharge from the puncta on pressure on the sac. The nasal duct was patulous, and fluid passed into the nose on syringing.

August 14, he had a chill followed by fever; the right upper lid red and edematous, the swelling extending to the forehead at the root of the nose where it was more tender than elsewhere; quite a marked exophthalmus and diminished movement of the right eye; pupil larger than the left.

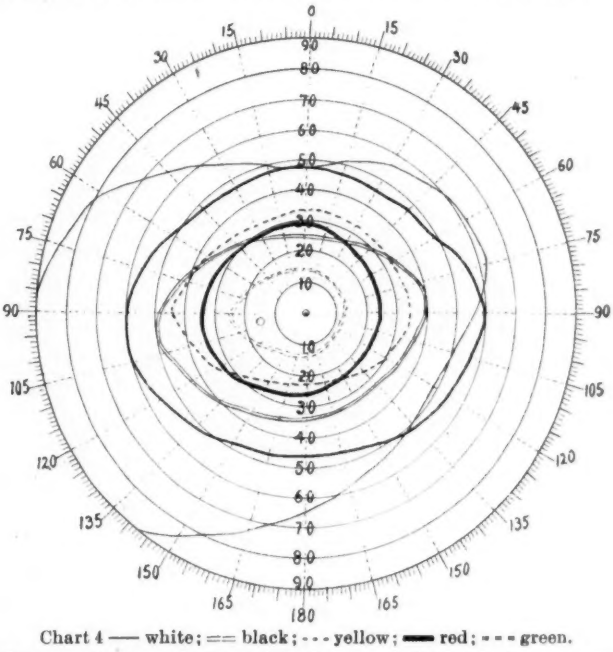


Chart 4 — white; == black; - - - yellow; ▬ red; - - - green.

August 15, swelling was slightly diminished; no chemosis of the conjunctiva; temperature normal.

August 17, some subsidence of the swelling and exophthalmus was noted; pupil normal; eye more movable; swelling confined to the upper lid; the fundus showed no change when examined with the ophthalmoscope; some bloody mucus discharged from the right nostril and increased by pressure on the tumor at the inner canthus.

August 20, the swelling was gone, no diplopia in any part of the field of fixation, no defect in the visual field on rough testing.

August 22, there was still some swelling at the inner canthus and tender on deep pressure.

About this time the patient left the city and did not return until October 26, when I saw him. He then complained of intense frontal headaches, pain on pressure above and below the supraorbital ridge, and over the swelling at the inner angle of the orbit; slight exophthalmus. He complained of chilly sensations, giddiness and nausea, temperature 100. He was quite anemic in appearance, and stated that he had lost twenty pounds during the preceding month.

Rhinoscopic examination showed the right middle turbinate much swollen and, on probing, caries of the ethmoid cells was discovered. The secretions were purulent and, while not very profuse, were observed to come principally from the right nostril, also flowing back into the postnasal space over the posterior end of the middle turbinate body. The electric light showed the right frontal sinus opaque, while the left frontal cavity and both maxillary sinuses were translucent.

Opthalmologic examination, made by Dr. Wilmer on October 27, was as follows:

Ophthalmometer showed a corneal astigmatism in the right eye, of 0.50 D., with rule, in the left eye corneal astigmatism of 1.50 D.

R. E. V.=20/15; accepted cyl. + 0.25; axis 180.

L. E. V.=20/30 with cyl. +0.62, 90=20/15.

Reads Jaeger No. 1 2″ equal; 20 feet, Exo. 2° ad. 4°, ab. 4°.

Color sense was good. The ophthalmoscope showed no change at all in the fundus. The perimeter showed a decided narrowing of the visual fields for white and colors in the right eye. There was also marked scotoma with its center corresponding to the normal blind spot, amounting to something more than its mere enlargement—as shown in the charts 1 and 2.

The left frontal sinus was the seat of a slight mucocele which was sufficient to reduce the visual field for white and colors.

The patient was admitted to the Episcopal Eye, Ear and Throat Hospital, October 27, and on the following day, under ether anesthesia the frontal sinus was opened in the following manner: After shaving the right eyebrow and thoroughly cleansing the parts, an incision was made through the brow commencing just within the supraorbital notch, and continued on to the nasal boss.

The flap, composed of integument and periosteum, was elevated, and a button of bone 1 cm. in diameter was removed by means of a crown trephine applied just above the supraorbital ridge and about one line from the median line. The outer table showed signs of commencing softening. On opening the sinus it was found filled with thick fetid pus and granulation tissue. The anterior wall and fronto-ethmoidal cells were in a carious condition, as were also the ethmoid cells, at least as far back as the junction of the middle with the posterior cells.

All diseased tissue was removed from the sinus, and with the little finger in the nose for a guide, all the ethmoid cells were removed with a sharp curette, as far back as they seemed to be diseased; a large opening was thus left between the sinus and nose. The walls of the sinus were then touched with a 20 per cent. solution of the chlorid of zinc, the cavity packed with iodoform gauze, one end being drawn out through the nose; the wound was then closed and hermetically sealed with iodoform and collodion.

On the second day of the operation the gauze drain was removed from the sinus through the nose, and the cavity irrigated daily with a saturated solution of boric acid. The patient made a rapid convalescence, and was discharged from the hospital on November 9, the secretions very much diminished in quantity. The irrigations were continued daily for two weeks longer, when the secretions from the sinus practically ceased. Examination of the eye, made nineteen days after the operation, showed no exophthalmus; mobility of the eye, normal.

R. E. V. = 20/20;

L. E. V. = 20/20;

20 ft., exo. 1/2, ad. 12°, ab. 4°.

The ophthalmometer showed a corneal astigmatism of 1.50 D. with the rule in both.

The visual fields, taken November 16, showed a marked improvement for white and colors, although they did not reach quite the normal standard, as will be observed by referring to Charts 3 and 4. When these abscesses have existed some time, they may result in a disease of the deeper structures of the eye, as in the form of an iridochoroiditis.

CHRONIC ABSCESS OF THE FRONTAL SINUS AND ETHMOID CELLS FOLLOWED BY A IRIDOCHOROIDITIS.

CASE 3.—This case demonstrates the serious results that are apt to follow these suppurative conditions. Mr. ——, aged 71, consulted me Dec. 4, 1894, giving a history of frontal neuralgia of ten years' standing, the pain starting at the inner angle of the orbit, radiating over the corresponding side of the head and face, and increased in intensity by an acute coryza. For a number of years he has had a yellowish purulent discharge from the left nostril, no swelling at the inner angle of the orbit, and he states that he has no disturbance of vision.

Rhinoscopic examination showed the left middle turbinate slightly enlarged, and a thin purulent secretion was observed coming from above, and below it in the middle meatus. The probe, when passed into the middle meatus, revealed an extensive caries of the ethmoid cells. By means of a sharp curette I removed large quantities of pus and carious tissue from the region of the anterior ethmoid cells, after which the probe could readily be passed into the frontal sinus. The cavity was frequently irrigated with a saturated solution of boric acid. As this was followed by a very decided improvement in his condition, it was thought best not to resort to any more radical measures for his relief on account of his age and a decidedly irregular heart action.

From time to time I have seen this patient, and about two years ago there seemed to be a tendency to an extension of the suppuration process backward into deeper and posterior ethmoid cells. Drainage, established by means of an occasional curetting, seemed to give the patient relief from his painful symptoms.

About two years ago the left eye commenced to trouble him, and he then consulted Dr. Herbert Harlan of Baltimore who has kindly given me the following notes on his eye-condition since he has been under his observation:

February 11: He complained of "a little mistiness of the left eye." V. O. D. = 15/100. V. O. S. = 8/100. He had been wearing bifocals. +1.50 gives O. D. 15/30; O. S. 15/200. The right fundus was a little cloudy, but good. Deep physiologic pitting of disc was evident. The left had large floating bodies in the vitreous. The vitreous was muddy. A patch of choroiditis was made out to the nasal side. He was put on a tablet containing iron, arsenic and strychnia, and his reading glasses changed to +4 D.

February 25; The eye was a little better. V. O. S. = 15/100 with glasses. Treatment was changed to ferri et hyd. chlor. cor. comp. (Mulford).

April 7: "Eye doing well until a few days ago." Now had marked iritis with adhesions. Atropia solution was used.

April 10: The pupil was partly dilated, the fundus muddy, and the eye red. Treatment was kal. iod., grs. xv, in essence of pepsin t. i. d.

April 28: "Eye more inflamed, last two days. Very uncomfortable. No great pain." Tension +, blood in ant. chamber, cornea cloudy. Eserin was instilled, and after a few minutes the eye felt better, and tension was less. Eserin was ordered and KI stopped, but ferri et hyd. given.

May 3: Tension was less and less blood in the anterior chamber.

June 17: "Eye did well until about ten days ago." Now very red, with blood in the anterior chamber, the pupil was closely contracted, tension +1. Atropia was ordered to be used carefully.

June 21: The left eye was better, the blood in the anterior chamber nearly absorbed, vitreous muddy; no fundus; light only.

July 17; O. S., no longer red; cornea hazy; no fundus; O. D. +2.50, 15/15; R. +4.50 reading.

April 18: O. S.; cornea clear, lens opaque, light; O. D.; pupil a little dilated, and responds sluggishly to light. V.= 15/15; field taken and found good; use of his distance glasses advised. Fraser's quin. comp. tablets were ordered.

May 18: The condition was the same.

November 15: The condition was the same.

December 30: A letter says the left eye is red and irritable and he wishes some other drops.

Jan. 26, 1899: +O. S., red and irritable; pupil closed; no light; O.D. well; kal. iod. and Fairchild's essence of pepsin were ordered.

March 20: O. S., red and heavy; tension; atropia was ordered and KI continued.

April 13: Enucleation was advised for O. S.

ETHMOIDAL AFFECTIONS IN RELATION TO DISEASES OF THE EYE.

Affections of the ethmoid cells are generally caused by diseases of the nose, and may exist alone, or complicate suppurative inflammations in the frontal, as has been previously mentioned, also in the maxillary and sphenoidal sinuses. According to the intensity of the inflammation and the cells involved, caries of the ethmoid may or may not be accompanied by ocular symptoms, a great deal depending whether the abscess is open or closed, and whether the anterior or middle and posterior cells are involved. In the open variety, where the pus has a free discharge into the nose, the eye may escape any injurious effects until the carious process has made sufficient advances to involve the deeper cells.

In the closed variety, however, the ocular symptoms are almost immediately present. Abscesses in this region are accompanied by the same ocular disturbances that are met with in frontal sinus inflammation, the pressure symptoms varying somewhat from those in the upper cavity. Supra- and infraorbital neuralgia, so-called cysts of the orbit, orbital abscess, exophthalmus, disturbances in refraction, scotomata, iridochoroiditis, changes in the visual field, are the symptoms most frequently found in well-advanced cases. The so-called cysts of the orbit are generally the manifestation of some form of disease of the ethmoid cells, either in the form of a closed abscess or a dilatation of the cells, the pressure being so great as to cause a marked displacement of the eye.

If the middle or posterior cells are affected without any involvement of the other neighboring cavities, the displacement of the eye is generally outward, while the inward mobility of the eyeball is decidedly interfered with.

At times, when there is a swelling and projection of the cells toward the orbit, it becomes very difficult to differentiate between a closed abscess, a cyst or a solid tumor.

The following case illustrates some of the difficulties that are met with:

NASAL POLYPI, ALVEOLAR SARCOMA OF THE ETHMOID CELLS, LATER INVOLVING THE ORBIT; PURULENT ACCUMULATION IN THE ANTRUM.

CASE 4.—Mrs. ——, aged 57, was referred to me by Dr. Stone, U. S. N., and stated that in October, 1898, she noticed a great difficulty in breathing through the left nostril, which on examination was found to be due to the presence of several large mucous polypi. These were removed in January, 1899, and some time afterward she had a profuse hemorrhage from that side of the nose which, however, was not attributed to the removal of the polypi.

March 1, when she first consulted me, she complained of pain in the supraorbital and infraorbital regions, pain in the eye, inability to breathe through the left nostril, photophobia and lachrymation. Examination of the eye, by Dr. Wilmer, showed both lids of the left eye swollen, there being also an extensive chemosis of the conjunctiva at the lower inner angle of the eye. Motion of the eyeball was interfered with to some extent, owing to the swollen condition of the orbital tissues. On palpation a firm mass was found along the orbital ridge of the malar bone, extending from the inner canthus 5 mm. outward.

No ophthalmometric reading could be made, owing to the condition of the eye. The patient was myopic, but normal sight could be obtained by use of proper lenses. Examination of the muscles showed the following: image seen with left eye, 1½° to the left and 1° below that of the right. Ophthalmoscopic examination revealed the veins and arteries very much engorged, slight pulsation, and slight elevation of the retina at the inner lower angle.

The day following, the chemosis had increased greatly and examination showed continued diplopia. The fields for white and colors were normal. Rhinoscopic examination showed the left nostril partially occluded by numerous small mucous polypi springing from a greatly swollen middle turbinate body. No pus was observed in the nasal chamber, but on forcibly blowing the nose small quantities of thick purulent secretion could be blown out, and she complained of a constant dropping into the postnasal space. Examination with the electric light showed both frontal and right maxillary sinuses translucent, while the left was absolutely opaque. The diagnosis in this case lay between a closed abscess of the ethmoid cells bulging into the orbit, and secondarily affecting the maxillary sinus, a dilatation of the ethmoid cells, or a solid tumor originating within them. The patient having lost her teeth several years before, on March 2, I perforated the left antrum, through the alveolar ridge about the location of the first molar, by means of a small trephine, and evacuated about a dram of rather thick pus. The cavity was irrigated daily with a saturated solution of boric acid, with the result of an almost complete disappearance of pus within three or four days.

I made several attempts to reach the seat of the ethmoid disturbance through the nose by means of a curette, but without much success; as the chemosis was rapidly increasing and the eye symptoms becoming more threatening it was decided to operate without further delay.

March 26 the patient was etherized, and, assisted by Drs. Wilmer and Greene, an incision was made through the base of the lower lid extending from the inner angle to nearly the full extent of the infraorbital ridge; the bulging ethmoid cells were exposed, and opened by means of a perforator. Through this opening a curette was passed into the ethmoid cells and with the little finger in the nose for a guide I was enabled to remove nearly all of these cells, which were found to be broken down and filled with pus and granulation tissue as far back as the posterior cells. The nasal wall of the antrum in relation with the ethmoid bone was also found badly diseased, and was removed, leaving a large communication between that sinus and the nose. The parts were then thoroughly cleansed with a boric acid solution, and the external wound closed. There was no microscopic examination made of the tissue removed from the ethmoid cells at this time. The external wound healed quickly, but at the end of a week it broke down at its inner third; the nose and antrum were irrigated daily with a boric acid solution.

The patient's condition was much improved for a time by the operation, especially in the subsidence of the chemosis and the pressure on the eye. The secretions from the nose and from the external wound were at no time profuse.

About two weeks after the operation she complained of increasing pain in the eye, in the infraorbital and supraorbital and temporal regions, the eye condition remaining about the same.

April 12 the eye condition was not so good, there being increased swelling of the lower lid, very hard to the touch, chemosis increasing. The nose, which had been thoroughly relieved by the first operation, now showed a return of the swelling, which on examination was seen to come from the seat of the operation.

By April 14 the pressure on the eye had increased decidedly—the preceding two days—chemosis being very much increased. The symptoms were so threatening that a second operation was insisted on.

April 15 the patient was etherized, and Dr. Wilmer, operating through the previous incision in the lower lid, discovered the floor of the orbit filled with a tumor formation of very firm consistency. It had extended from the ethmoid cells along the floor of the orbit, infiltrated the lower lid and was extending into the upper lid back of the lachrymal sac.

Not having authority to remove the eyeball and the contents of the orbit, as the indications so strongly called for, he had to be content with removing as much of the tumor as possible through the external wound, removing a portion of the floor of the orbit at its juncture with the ethmoid bone. A drainage-tube was passed into the orbit, and the wound closed. A microscopic examination, made by Dr. Walter Read, U. S. A., showed the tumor to be of the alveolar sarcoma variety. The patient's husband, who is a physician, realizing the unfavorable prognosis of the case declined a more radical operation for her relief.

April 20 the patient was discharged from the hospital, in order that she might be removed to her home in New York State. In a letter shortly after her arrival home her husband stated that the growth was slowly increasing.

DISEASES OF THE SPHENOIDAL SINUSES IN RELATION TO DISEASES OF THE EYE.

There is no means of knowing to what extent sphenoidal disease exists. Whether it is as frequent or less frequent than inflammations in the neighboring cavities of the nose is a question yet to be determined. In cases in which the symptoms are not well defined, it is impossible to make a diagnosis, and it is frequently only when the disease has advanced to such an extent as to cause serious eye disturbance or other symptoms that threaten an extension to the meninges, that we can form a definite opinion as to the condition of these cavities. These cavities are subject to the same forms of inflammation noticed in other sinuses, and they are also occasionally the seat of tumor formations. A suppurative inflammation in these cavities alone is exceedingly rare, for it is generally associated with disease of the ethmoid and frontal sinuses.

The diagnosis of abscess of the sphenoidal sinuses rests almost entirely on rhinoscopic and ophthalmologic examinations, for the subjective symptoms may be wholly wanting, or of such a manifold variety as to make it impossible to diagnose with even a slight probability a disease of this cavity. The most common rhinoscopic finding is the appearance of pus in the superior meatus, posteriorly. Even this is not positive evidence that the source of the trouble is the sphenoid alone, for in many instances the posterior ethmoid cells are the seat of the disease. But when these cells are the seat of a suppurative inflammation, it is safe to say the sphenoidal cavities are also involved, for the bony partition that separates these cavities is so thin they can not withstand any pressure without giving way under it, thus forming a direct communication for the extension of any pathologic process from one cavity to the other. Occasionally the anterior wall of the sphenoid sinus may bulge forward. When this occurs the source of the purulent secretion is then readily recognized.

In mild cases, where the pus finds a ready exit through the nose, the eye may not be involved; but where the inflammation is severe from its outset, or there is an obstruction to the outflow of pus, pain in the occipital region, extending to the vertex, will be marked. There may be also an increased lachrymation, photophobia, pain in the orbit back of the eye, exophthalmus, ptosis, strabismus, diplopia, orbital abscess, and from a partial to a complete loss of vision.

The following case represents some of the manifestations of this disease.

ABSCESS OF THE SPHENOID SINUS, PARALYSIS OF THE EXTERNAL RECTI.

CASE 5.—Mr. ——, aged 57, was referred to me by Dr. Wilmer, April 17, 1899. When I first saw this patient he complained of intense pains in the occipital region, radiating to the vertex; giddiness, nausea, and double vision. There was a profuse fetid purulent discharge from both nostrils and from the postnasal space. After thoroughly irrigating the nose, a rhinoscopic examination showed the frontal, ethmoidal and maxillary sinuses to be free from disease. The posterior wall of the nasopharynx was observed bulging forward, nearly touching the velum palati, the bulging being greater on the right than on the left side. Pus in large quantities was seen in the vault of this space, flowing forward in the nasal chambers and below into the pharynx.

He was first seen by Dr. Wilmer, Feb. 27, 1899, when he showed a complete paralysis of the right external rectus only. Examination of the eye, with correction for refraction showed the sight normal in each eye. Pupillary reaction was normal, as were also the visual fields for white and for colors. The interior of the eye showed nothing abnormal.

April 17 there was a paralysis of both external recti, but no other changes in the eyes. He complained of great pain at the back of the head and vertex.

April 21 the patient was admitted to the Episcopal Eye, Ear and Throat Hospital, and on the following day, under cocain anesthesia, I opened the left sphenoidal sinus by means of a gouge passed through the nose. The opening was made rather too high, but was sufficiently large to admit of a free discharge of pus, which gave him considerable relief and which lasted for several days. At this time I supposed both sinuses communicated, and hoped that one opening would be sufficient, but the pains soon returned and seemed to increase in intensity.

April 28, under ether anesthesia, I made a free opening in the right sinus, by means of the gouge passed through the nose, using my finger in the postnasal space as a guide. This was followed by a profuse discharge of very thick fetid pus. The sinus was freely curetted, removing as much carious bone as could be reached by my instrument, and was irrigated with a saturated solution of boric acid. This operation was followed by almost complete relief from pain, and a very decided

improvement in the paralysis of the right external rectus, while there is none in the paralysis of the left.

The sinuses have been irrigated daily with a boric acid solution, resulting in a decided dimunition in the quantity of purulent secretion. He was discharged from the hospital on May 2, greatly improved. The opening in the left sinus shows a tendency to close, and in consequence the occipital and vertex pains have returned, but they are not so intense. This cavity will probably have to be opened again. This case is especially interesting from the fact that the other sinuses are not involved, and the pressure, instead of being made on the optic nerve, as is usually the case, is directed upward and outward and involves the abducens nerves just before passing through the sphenoidal fissure.

DISEASES OF THE MAXILLARY SINUS IN RELATION TO THE DISEASES OF THE EYE.

The maxillary sinus is subject to the same diseased conditions that are met with in the other accessory cavities, and probably is the most frequently affected, as it has both the teeth and the nose from which pathologic processes may extend. It probably is, however, less frequently complicated with diseases of the eye than the other accessory sinuses.

Many of the eye symptoms that are met with in abscess of the maxillary sinus are reflex in character, such as narrowing of the field of vision, photophobia, dilatation of the pupil, blepharospasm, and ptosis; while others are the result of an inflammatory extension; such as osteoperiostitis, abscess of the orbit, dacryocystitis, and iridochoroiditis.

It will be observed that there are many symptoms of diseases of the eye, when associated with accessory sinus inflammations, which are common to one or more of the affected cavities. There are, however, certain symptoms which are peculiar to certain sinuses, and it is only by the closest observation of these cases, both from the rhinologic and ophthalmologic side, that we can hope to make an early diagnosis. While pain is a symptom met with in these affections, its location will frequently aid one in determining the cavity which is the seat of the inflammation. This, however, must not be depended on alone, for occasionally in ethmoidal abscess the pain is referred to the supraorbital ridge as well as to the eye and infraorbital region.

Orbital abscess may occur as readily from an extension of an inflammation of one cavity as from another. I believe, however, basing my opinion on my own experience, it more frequently results from frontal sinus disease. A narrowing of the field of vision for white and for colors may follow an abscess in either the frontal, ethmoidal, sphenoidal, or maxillary cavities. It is, however, more frequently met with when the frontal and ethmoidal sinuses are jointly diseased. Refractive disturbances are more frequently noticed in inflammations of the frontal and ethmoidal cavities, and generally in those cases where the pressure is exerted either at or posterior to the equator of the eyeball.

Exophthalmus may be present in any well-advanced abscess of the accessory sinuses; the extent and direction in which the eye is pressed from its normal plane indicates the cavity which is affected; e. g., in frontal disease the eye is pushed forward and downward, in ethmoidal, forward and outward, in sphenoidal, directly forward and slightly outward, while in maxillary disease it is directed upward and outward.

Sudden blindness, together with ptosis and strabismus, when associated with abundant discharge into the postnasal space, is indicative of sphenoidal disease.

EYE TROUBLES ATTRIBUTABLE TO NASOPHARYNGEAL AND AURAL DISTURBANCES.*

BY JOSEPH A. WHITE, M.D.

Professor of Ophthalmology, and Associate Professor of Otology and Laryngology, University College of Medicine.

RICHMOND, VA.

The direct anatomic connection between the eye and nose makes it easy to understand how disease can spread from the latter to the former by way of the nasal duct. Moreover, the intimate nervous and vascular connection between the two organs also plays an important part in the propagation of disease from the nose to the eye. Both these modes of transmission have been recognized since the last century, and referred to by different authors, but Bresgen—1881—was the first to lay any special stress on the fact that conjunctival catarrh was often dependent on nasal catarrh. Since his article appeared, medical literature has had numerous contributions on this and other eye troubles of nasal origin, whether by direct or reflex communication. Appended to my article on "Neurosis of the Nose and Nasopharynx," in Burnett's "System of Diseases of the Ear, Throat and Nose," and to Dr. Gould's article in the same treatise, on "Disease of the Eye Dependent on Diseases of the Nose," can be found an extensive bibliography of the subject from the earliest times to 1892. Since then, other contributions on the subject have appeared from time to time, adding to the accumulation of testimony to the importance of considering the nose as an etiologic factor in eye disease.

From these references it will be seen that, according to a large number of observers, we have not only troubles of the lachrymal apparatus by direct transmission of pathogenic organisms from the nose to the eye, but a large number of other eye diseases traceable to direct or reflex extension from nasal and nasopharyngeal causes, such as asthenopia, photophobia, retinal hyperesthesia, muscæ volitantes, ocular neuralgia, contraction of the visual field, blepharospasm, phlyctenular ophthalmia, conjunctivitis, keratitis, mydriasis—Goris and Trousseau—amaurosis, amblyopia, strabismus and even glaucoma, myopia—congestion of uveal tract (Landolt)—and astigmatism (spasmodic).

The supposed nasal and nasopharyngeal causes were as numerous as the resulting eye troubles, among them being acute rhinitis, chronic hypertrophic rhinitis, synechiæ, nasal polyps, growths, diseases of the accessory sinuses, adenoid tissue, enlarged tonsils, simple atrophic rhinitis, ozena and nasal hydrorrhea.

Coryza gives rise to lachrymation, conjunctival injection, dacryocystitis and ocular pains. Chronic rhinitis produces rebellious conjunctivitis and blepharitis, phlyctenular conjunctivitis, epiphora—asthenopia—myopia (?)—congestion of uveal tract (Landolt)—and astigmatism (spasmodic). Ozena produces ulcers of the cornea, dacryocystitis, neuritis, iritis, chorioretinitis, amblyopia, amaurosis and orbital phlegmon. Purulent rhinitis causes iritis and uveitis, phlebitis of ophthalmic veins, and contraction of the visual field. Sinusitis—frontal, maxillary, ethmoidal, etc.—produces orbital neuralgia, iritis, iridochoroiditis, orbital cellulitis, neuritis, exophthalmus, diplopia, etc. To nasal hydrorrhea is due neuritis and atrophy of the optic nerve. Nasal synechiæ cause blepharospasm, conjunctivitis, amblyopia, and strabismus, and nasal diphtheria and croup, similar af-

*Presented to the Section on Ophthalmology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

fections of the conjunctiva. Adenoids cause phlyctenular keratitis and conjunctivitis, blepharitis and strabismus, etc., while pharyngeal diphtheria gives rise to paralysis of accommodation, and tonsillar affection to lachrymation, blepharospasm, conjunctivitis and keratitis, and orbital thrombosis.

Eliminating the accessory sinuses, and the ordinary causes of nasal stenosis, which are treated of in other papers, I will briefly refer to the eye troubles, known or supposed to be etiologically connected with nasal catarrh without nasal obstruction, with hydrorrhea, with atrophic rhinitis and ozena, and with lymphoid tissue in the nasopharynx, such as adenoids and enlarged tonsils.

It is almost a waste of time to speak of the well-established connection between affections of the lachrymal apparatus and nasal disease, probably 80 per cent. of the former being caused by the latter, either by the direct extension of germs from the nose to the lachrymal sac, or by the obstruction of the nasal orifice of the nasal duct, thus preventing the out-flow of the lachrymal fluid, with its consequent disintegration and the injurious effects therefrom.

Although epiphora can be the result of any lid troubles causing malposition of the punctum, or of that rarer cause, closure of the canaliculi, I very seriously doubt whether the usual departure of troubles of the lachrymal sac, viz., obstruction of the nasal duct, is often due to other causes than nasal disease. I think most writers and observers are of accord on this point, although all do not lay equal stress on the necessity of the nasal treatment, if we would cure the lachrymal trouble.

It is interesting to note some of the results of slight operations on the nose and throat as indicating another line of connection with the eye. In 1892 Ziem reported having observed hyperemia of the disc with venous pulsation, following the application of the galvanic cautery to the nasal mucosa, which he explained by the anastomosis between the vessels of the nasal fossæ and the orbit, probably by way of the ethmoidal vessels—an interesting coincidence if not a proven sequence. Akin to this is the report of amaurosis—optic neuritis—following on a traumatic hemorrhage from the nose, by Schmidt-Rimpler, which he supposed due to resulting ischemia of the retina. Somewhat similar was Blok's case—reported to the Ophthalmological Society of the Netherlands, in 1894—of marked asthenopia in emmetropia with normal convergence, cured by cauterization of the inferior turbinate, evidently of reflex influence. More curious still is the case reported by P. Viollett,[1] of permanent strabismus following the cauterization of the nasal mucosa, and one more difficult of logical explanation. He supposed it to be due to nervous shock in an individual predisposed to strabismus by a pre-existing astigmatism and a general nervous state. This case recalls that of Goureau[2] who, in 1891, reported the cure of strabismus in a child, by the removal of adenoids, in which instance the shock worked in the inverse order to the first case. Laurens[3] reported another case of strabismus cured by removal of adenoids. In May, 1894, in a paper entitled "Nasopharyngian Therapy in Ocular Affections," presented to the French Ophthalmological Society, Guibert, among other cases, recorded one of recurring keratitis cured by removal of adenoids after local and constitutional treatment had signally failed. Ziem has reported a similar case.

I have often seen pain in the eye produced by the operation for adenoids, which is in the same line of reflex effects. Other cases of like character have been recorded, and they seem to point to a physiologic and pathologic relationship between the nose and eye along lines not yet thoroughly explored, and in consequence the explanation of the production of such effects is not always satisfactory.

These results of operations on adenoids are probably open to criticism, and especially the supposed cure of keratitis by this means. We are all familiar with ulcerative keratitis as an accompaniment of lachrymal disease, which may have been caused by direct infection from the nose, but it is difficult to account for a keratitis secondary to nasal disease without accompanying affection of the lachrymal apparatus, even in ozena—Trousseau, Nieden and Massini—as its so-called characteristic microbe, the bacillus of Loewenberg, Fraenkel and de Vedova has been found by Terson and others in the lachrymal fluid, without any alteration of the conjunctiva or cornea. Still, Fortunati[4], in February, 1896, reports two cases of ulceration of the cornea in conjunction with nasal trouble, in which the ocular treatment was of no avail, and which were only benefited by the improvement of the nasal condition. In these cases the lachrymal passages were in a normal condition, and moreover the nasal trouble was not of microbian origin. He explained it as a neuroparalytic trouble, the cornea being somewhat anesthetic without phagedenic infiltration, without hypopyon and almost without pain, the trophic disturbance starting probably in the peripheral filaments of the second branch of the fifth pair in the nose, extending to the Gasserian ganglion and thence to the ciliary ganglion and ciliary nerves.

Dr. Haight[5], in the discussion of his paper on "Diseases of the Eye, Caused by Diseases of the Nose," reports a case of ulceration of the cornea resistant to all treatment, until the accompanying adenoids and enlarged tonsils were removed.

I do not think there is any question as to the apparent influence manifested by the presence of lymphoid tissue in the post-pharyngeal space and fauces on the progress of so-called phlyctenular keratitis or keratoconjunctivitis, which often develops into or is accompanied by deep ulceration of the cornea. Still, the explanations offered differ, some claiming it to be the effect of a generous scrofulous dyscrasia, and others that the condition of the eye is reflexly produced by the presence of the throat trouble, proven in many instances by the rapidity with which the eyes get well when the adenoids and enlarged tonsils are removed, an argument met by the rejoinder that the removal of the latter, with the improvement to breathing, brings about an improvement in the general health and reacts favorably on the eyes.

That iritis and uveitis have been supposed to be etiologically connected with nasal troubles is well known since Ziem first reported a case of iritis which he claimed to be caused by purulent rhinitis.

In May, 1895, before the French Ophthalmological Society, Fage reported a case of iritis associated with ozena which he supposed to be due to the latter by infection from the coccobacillus of Loewenberg, but as in Ziem's case the demonstration is not conclusive. E. Berger also observed a case associated with purulent rhinitis.

W. C. Posey[6] reports a case of *metastatic uveitis* with loss of sight, consecutive to a purulent rhinitis. In the discussion, Randall said he had seen a similar case. There was no symptom of trouble with accessory sinuses. Panas[7] supports this contention with the explanation that the eye trouble is due either to the passage of microbes by way of the vessels and lymphatics from the nose, an endo-infectious process, or to toxin poisoning.

So also may be explained E. Berger's case of central scotoma in a woman with ozena, in whom the nasal treatment ameliorated the visual defect.

Sulzer's[8] two cases of optic neuritis with scotoma, in connection with ozena, cured by treatment of the nasal affection, are in the same line, due either to the propagation of an infectious process by way of the vessels and lymphatics, or to toxin action, as in post-diphtheric paralysis or in tetanus. In like manner might be explained cases of amblyopia and amaurosis in ozena by an infectious process traversing the ethmoid plate, and causing subacute basilar meningitis, with secondary involvement of the optic nerve.

Panas[9] reports a case of double orbital thrombosis due to gangrene of the tonsil—infection by way of the anastomotic veins pointed out by Trolard, connecting the tonsil with the cavernous sinus through the foramen ovale.

Asthenopia, lachrymation and contraction of the visual fields were long ago reported by Hamilton[10] in cases of atrophic rhinitis and ozena, and since observed by others—these conditions being improved by the nasal treatment. I have seen cases of asthenopia and pain in the eye and ear in connection with atrophic rhinitis without appreciable lesion of the eye or ear which appeared to be due to the nasal trouble.

The connection of optic neuritis and nerve atrophy with nasal hydrorrhea or serous rhinorrhea is a subject of interest, owing to the obscurity of the etiology. Bosworth collected 18 cases, of which 5 had optic nerve atrophy. These were reported by Baxter, Leber and Nettleship, each 1, and 2 by Priestly Smith. Professor Körner[11] has added four more to these, 1 each by Gutsche, MacKenzie Wallace, Wood and Hardy, and 1 by himself. He overlooked 1 reported by A. Emrys-Jones, making 10 in all, of which 4 died, 1 recovered and the result in the others is unknown. Dr. Gould reports 2 cases, 1 by Elliotson and 1 by Paget, supposed to be of the same character, but, on examination, I find no mention of the condition of the optic nerve in either case. An autopsy was performed in 2 of them—in Baxter and Gutsche's; in the former the result was negative, in the latter, death was found to be due to meningitis, but a tumor of the hypophysis was found which had extended into the sphenoidal sinus. The optic nerves, especially the right, were found compressed by the tumor and there was probable neuritis. Körner thinks the discovery of a growth in this locality is a step toward the elucidation of these enigmatic cases.

Since Bosworth made his collection of cases of nasal hydrorrhea, in 1889, many such have been put on record—the list is a long one, but these are the only ones with optic nerve complications, as far as I have been able to discover. It is possible more of them developed optic neuritis, and recovered, but, in the absence of the ophthalmoscopic examination, this is a mere surmise. In all probability, both the hydrorrhea and the neuritis are from the same cause, instead of the latter being caused by the former.

I have treated two such cases in the last year, one a typical one of two years' duration, with constant discharge of a clear limpid fluid, and a resulting chronic eczema of the upper lip, and the other with intermitting attacks. While both have shown minor eye troubles, such as asthenopia, with congestion of the conjunctiva and blepharitis, neither has had any optic neuritis. In neither have I been able to discover the cause of the discharge.

From this résumé of the relations between naso-pharyngeal and eye troubles, it will be observed that disease is transmitted from the nasopharynx to the eye by more than one way: it may be by direct microbian contamination along the lachrymal passages; by mechanical obstruction of the nasal duct at its lower end or in its canal, with resulting pathologic changes; by propagation through the blood-vessels and lymphatics; by toxin poisoning; or it may be by reflex nervous influences. It is in any or all of these ways that pathologic alterations of the mucosa of the nose and nasopharynx can bring about secondary changes in the organ of vision and its adnexa.

Enough, however, has been brought forward to show at least the importance of examining the nose and nasopharynx when dealing with eye troubles of doubtful causation or intractable to local treatment. It has often been my experience to find nasal trouble present in cases of intractable asthenopia, and also of recurring conjunctivitis, which were benefited by the cure of the nasal complication, but I have never seen a case when I was satisfied this was the sole cause of the ocular trouble. For example, I have seen reflex trouble, such as blepharospasm, temporarily benefited by nasal treatment, which recurred later, and was found to have an ocular cause underlying it. This, however, does not apply to disease of the lachrymal apparatus in which, as previously stated, I feel assured that the nasal treatment is of as much avail, and often as necessary, as the treatment of the eye, to prevent frequent relapses.

EYE TROUBLES SUPPOSED TO BE DUE TO AURAL AFFECTIONS.

The connection between the eye and ear is one long known and often discussed. Medical literature is filled with references to this relationship in its anatomic, physiologic and pathologic aspects.

Anatomically they are connected, 1, by way of the brain envelopes and the proximity of their nerve nuclei; 2, by the anastomosis of the superior cervical plexus and the auriculotemporal with the facial at the mastoid apex, and by the branches of the tympanic plexus, which innervate the lining of the drum and the mastoid cells; and 3, by the circulation.

Physiologically they are connected by the functional action of the trigeminus; by the supposed physiologic influence of the semicircular canals; and by the peculiar phenomena observed in the reaction of sight and hearing on one another, in the conjoined action of one sense on stimulation of the other.

It has been shown by Duval, Laborde and others, that lesions of the trigeminus can bring about trophic disturbances in the eye at the same time—keratitis—and in the ear, and that certain pathologic conditions of the ear can by extension to the trigeminus at the level of the Gasserian ganglion give rise to ocular lesions, chiefly of a reflex character. The investigations of Cyon, Baginsky, Hogyes, etc., show that lesions of the semicircular canals can produce various ocular disturbances.

As for the peculiar phenomena referred to, such as light and color sensations caused by perception of sound, they have so far not been satisfactorily explained; but we know that in some people, especially those of high-strung nervous organization, or so-called neurasthenics, the perception of a certain sound or tone causes at the same time the perception of a particular color—the eye functions being undisturbed—which, I suppose, under other conditions could be reversed, and although it probably has its origin in the nerve-centers, and not in peripheral excitation of these special organs, it shows an intimate connection between them, the nature of which has yet to be elucidated. The physiologic relationship

is also shown by d'Arsonval's experience in becoming deaf for one to one and a half hours after steadily gazing at an arc light for some minutes. Waldeyer's morphologic parallel between these two organs is familiar to you all.

Retina analogue of organ of Corti.
Choroid analogue of connective tissue wall of cochlear duct.
Sclerotic analogue of bony labyrinth capsule.
Conjunct. sac analogue of tympanum.
Cornea analogue of membrana tympani.
Nasal duct analogue of Eustachian tube.
Orbit analogue of bony auditory meatus.

From these anatomic and physiologic relations we can see that it is not unnatural to look for some pathologic connection between troubles of the eye and ear.

Blepharospasm apparently results from cerumen impaction, foreign bodies in the external ear and syringing the ear—Rampoldi, Ziem, Buzzard, etc.; also from the presence of pus or polyps in the drum—Deleau, Duterné, Gottstein.

Blurred and double vision have also been reported as having resulted from examinations, traumatisms and diseases of the external ear.

Lachrymation, ciliary neuralgia and muscular disturbances have appeared as a sequence of traumatisms, causing lesions of the drum.

Amblyopia and contracted field for both light and color have seemingly been caused by obstruction of the Eustachian tube, and improved by catheterization—Kisselbach and Wolfberg. Contraction of the field was also observed by Lucae, from the use of the air douche in the external canal in perforation of the drum, probably due to irritation of the tympanic plexus.

Gervais reported strabismus with myosis from mastoid inflammation, which disappeared when the abscess was opened.

Troubles of the accommodation have been observed from irritation of the branches of the trigeminus in the organ of hearing, and cured by the improvement of the aural condition—Politzer, Wolfberg, Urbantschitch.

Nystagmus is probably one of the most commonly reported eye reflexes from the ear. Baginski's experiments on rabbits in this line are well known, and show the muscular disturbance to arise from water thrown into the ear, and from disease of the labyrinth and semicircular canals—Jansen, Cohn, Kipp, Urbantschitsch.

Nystagmus should be watched for carefully, as it is sometimes so slight that it is not perceived by the patient. It is more readily noticeable when it occurs from syringing the ear in suppuration of the drum, and is nearly always from labyrinthine irritation—occasionally it accompanies meningitis of aural origin, or thrombosis about the petrous bone. Geronzi—October, 1897—reported a case from an acute non-suppurative middle ear inflammation, following influenza. There was also diplopia in outer parts of the entire field. Singer[12] reported a case following a Stacke operation, whenever pressure was made on the drum, or the air in the external meatus was rarified. The pupils dilated at the same time. Urbantschitsch also reported a case of aural polyps in which nystagmus was produced each time the polyp was pressed on. Phluger[13] had several years previously reported a similar case. Gruber has also seen such cases.

Abducens paralysis has been observed in one or two cases of intracranial involvement, and recently—German Otological Society, May, 1898—Habermann reported a case of middle-ear suppuration cured in ten days, but which relapsed in three weeks, with headache and sudden paralysis of the abducens. The dura was exposed and found hyperemic only. The paralysis, which was permanent, was supposed to be due to extension of the inflammation into the petrous and sphenoid bones. In the discussion that followed Katz stated he had seen the same thing due to meningitis caused by ear trouble. Brüeger had also seen it in what was supposed to be latent meningitis of aural origin. Mann had seen it in perisinuous (?) abscess. Jansen thought it due to serous meningitis, dependent on sinus thrombosis or epidural abscess. Habermann, however, concluded that sinus trouble could be excluded, as he had seen abducens paralysis on the opposite side from the ear trouble.

Paralysis of the orbicularis has been observed as resulting from foreign bodies in the external ear—non-perforating catarrh of the drum, purulent otitis media, etc.

Hippus—alternating contraction and dilatation of the pupils—has been observed by Pisenti[14] in a person with chronic middle ear catarrh, each time the Eustachian catheter was used, and each time air was driven into the drum. Reflex might be by three ways:

1. Irritation of the trigeminal branches in the floor of the nose, transmitted to the sensory root of the opthalmic ganglion. 2. Irritation of the posterior and inferior ethmoidal nerves and transmitted by the ophthalmic ganglion to filaments of the oculomotor. 3. Irritation of the internal ear by dilatation of the drum and transmitted from the ampulla to Deiter's nucleus and thence to the nuclei of the sixth and third pairs.

Purulent choroido-iritis from purulent otitis is reported by Kipp and Pomeroy, either of metastatic origin from emboli, or possibly by extension to brain envelopes and along optic nerve sheaths to the eye. Panas[15] ("L' auto-infection dans les maladies oculaire") reports a similar case in the service of Dr. Quénu, except that the metastatic panophthalmitis was on the opposite side from the diseased ear, the eye on the same side remaining intact.

Orbital cellulitis, with secondary neuritis and amblyopia, has also been observed by the same author, as the result of purulent otitis media, which was cured by injection of antistreptococcus serum when ordinary measures had failed.

Obscuration of visual field and keratitis have been observed by Knapp—mydriasis and hemiopia by Moos, in Meniére's disease; whether as a sequence or coincidence is doubtful.

Schwartze has reported a case of progressive amblyopia in a subject of an acute affection of the acoustic nerve, which was arrested and cured by leeching.

Statistics of deaf mutes show a larger number of cases of amblyopia—G. Mayer, Schermer, Gellé, Schmolz and others.

Wyatt Wingrave—October, 1897—reported a case of tuberculosis of the ear with optic neuritis. There was a discharge from the ear, but the general health was perfect. He thought it might be due to latent meningitis, or a tuberculous gumma. The good health, however, was a contraindication of meningitis, and the age, only 25, of gumma.

Optic neuritis is also frequently found in connection with mastoid abscess, suppuration of the drum, and their intracranial complications. Exophthalmus and strabismus are also found in the same connection—Zaufal, Kipp, Schwartze and others. Paralysis of the oculomotor nerves and homonymous hemianopsia have also been observed from the same causation.

These ocular manifestations, resulting from suppur-

ative otitis, are of especial diagnostic significance in determining the necessity of operative intervention. While optic neuritis is not a constant symptom of meningitis, or cerebral abscess, it usually indicates some participation of the brain or its envelopes with the ear trouble. It, like all other so-called diagnostic signs, might be misleading under unusual conditions. I have seen a case of middle ear suppuration, intractable to treatment, cured by opening the mastoid, consent of the patient being obtained only by my assurance of probable intracranial complications, because of the advent of optic neuritis. The operation showed there was no intracranial trouble due to the ear disease, the neuritis being only a coincidence, and not a sequence. This, however, does not materially detract from the value of neuritis as a symptom of brain involvement. When exophthalmus and swelling of the eyelid accompany the neuritis, we can be reasonably sure of thrombosis.

When we analyze the recorded cases of ocular phenomena in aural troubles, we find that there is occasionally some uncertainty about the connection of the two. It is easy to understand why photophobia, eye pain, etc., can be a sequence of ear trouble, because of the intimate nervous connection by the trigeminus branches, but it is hard to see how amblyopia can result from uncomplicated inflammation of the middle ear, even in deaf-mutism, although in such cases the visual function may be prevented from attaining its complete development, just as there may be arrest of development of the cerebral centers. Badal also calls attention to the frequency of serious trouble of the fundus oculi in these cases. In regard to nystagmus, I can not see how it may be physiologically explained by the reflex irritation, without some complication of the internal ear.

The question of ocular troubles in vertigo and Menière's disease is involved in obscurity, although, according to Mendel (Berlin), vertigo is a collection of symptoms determined by an alteration of the sense of equilibrium, combined with defective function of the eye muscles. Probably, however, the eye examination may help to make a diagnosis between Menière's disease and a cerebellar lesion.

Still, while much is yet to be explained in regard to pathologic influence of the ear on the eye, we may conclude from what we have before us that the influence really exists, and is exerted by both direct and indirect propagation, by way of the nerve tract and by the blood current.

BIBLIOGRAPHY.

1. Annales d'oculistique, June, 1897.
2. Recueil d'ophthalmologie.
3. Med. Presse, Feb., 1896.
4. Archiv. Ital. di Otol., Rhin., etc.
5. JOURNAL, May 21, 1898.
6. Oph. Record, Jan., 1898.
7. L'auto-infection dans les Maladies Oculaires.
8. Annales d'oculistique, Jan., 1895.
9. Loc. cit.
10. Trans. Intercollegiate Congress of Australasia, 1889.
11. Archives of Otology, Oct., 1898.
12. Munch. Med. Woch., June, 1898.
13. Berliner Klin. Woch., 1891.
14. Bul. de l'Acad. de Med., Peruga, 1897.
15. Archives d'Ophthal., May, 1897.

DISCUSSION.

DR. HOLMES—I can only make a very few remarks on this subject, because of lack of time. Dr. Bull deserves the thanks of the ASSOCIATION for such a terse and instructive paper. It is my experience that the frontal sinus is not so often attacked as we assume. I had opened the sinus a number of times—a matter of exploration where there was every evidence of disease, but found that it was limited to the ethmoidal or sphenoidal cells, and at times to the antrum of Highmore. I agree with the Doctor that the lamp test for the frontal sinus is of little or no value. The danger of treating the frontal sinus through the nose is such that I think it should not be undertaken except in the rarest cases. I attempted it a number of years ago, but after dissecting a great many specimens, I demonstrated how impossible it is to do this without danger, especially when the parts are softened by disease. The liability of invading the cerebral cavity is greater and quite a number of deaths have resulted. If I wish to know anything about the sinus, I prefer to make an exploratory opening, which can be made small, and at the end of the week nothing is left but a small white line, and in the course of a month or two nothing at all to show that any operation has been done. If you find disease you can easily enlarge the opening.

With regard to the maxillary antrum, I do not believe that the teeth play a very important part in disease of the antrum of Highmore; I believe it comes from the nose in the vast majority of cases, and I base that opinion on the extensive examination of cadavers. It is true that once in a while it may occur from the teeth, for bad dentistry, fracture of the process, etc., may cause it. I have seen quite a number of antrum affections with little or no complications relating to the eye, and it is my limited experience that we do not get eye symptoms so often in diseases of the antrum of Highmore as we do in diseases of the frontal, ethmoidal or sphenoidal sinuses. The illumination test for the antrum of Highmore is very important, but I should not place any value on any test excepting that which gives the red reflex from the pupil; I am not speaking of the new test, the retromaxillary illumination, but of the ordinary tests, and with those I feel safe in assuming the presence of infection if I do not get a pupil reflex. I have often injected water into one sinus and then made the test, getting the pupil dark; then evacuating the sinus I would again get the pupillary reflex, showing that even a small quantity of fluid can be detected.

Now I wish to say one word about iodoform. I have not used it for five years, for it is an abominable drug. I am satisfied that we get quite as good results without that stinking drug anywhere about our patients and I do not see how we can justify ourselves in continuing to use it, especially as it has been associated with diseases that patients would not like to be charged with.

As to the majority of cases being cured in six weeks, I am sorry to say that mine are not. I have some that have been going on for five years, with large openings through the canine fossa, and there are cases no one could cure. Of course the acute cases may be cured quickly.

SOME OF THE WAYS IN WHICH X-RAYS ASSIST IN MEDICAL DIAGNOSIS.*

BY FRANCIS H. WILLIAMS, M.D.

BOSTON.

For satisfactory medical work with the X-rays, the first requisite is an efficient apparatus, the second, experience in examining a large number of cases.

It is impracticable in so short a paper to describe and compare the advantages and disadvantages of the various forms of static machines and coils that have been used to excite vacuum tubes, but I present photographs of the static machine I have been using at the Boston City Hospital for some time past, which give in themselves a sufficient idea of the machine and of my method of examining patients. The patients are brought to the X-ray room on a stretcher, that fits wooden horses placed in front of the machine, so that they are spared all possible fatigue. This machine has four revolving plates, six feet in diameter, and four fixed plates, six feet four inches in diameter. In Europe they are using coils more than static machines.

The vacuum tube is the part of the X-ray outfit that demands the most care and study by the physician. Those designed by Dr. William H. Rollins of Boston I have found excellent for my purpose. They are provided with his regenerators for lowering the vacuum, and the anode in one form is so constructed as to be readily rotated if the energy used is sufficient to melt a hole through the platinum; in another form the anode is hollow and can

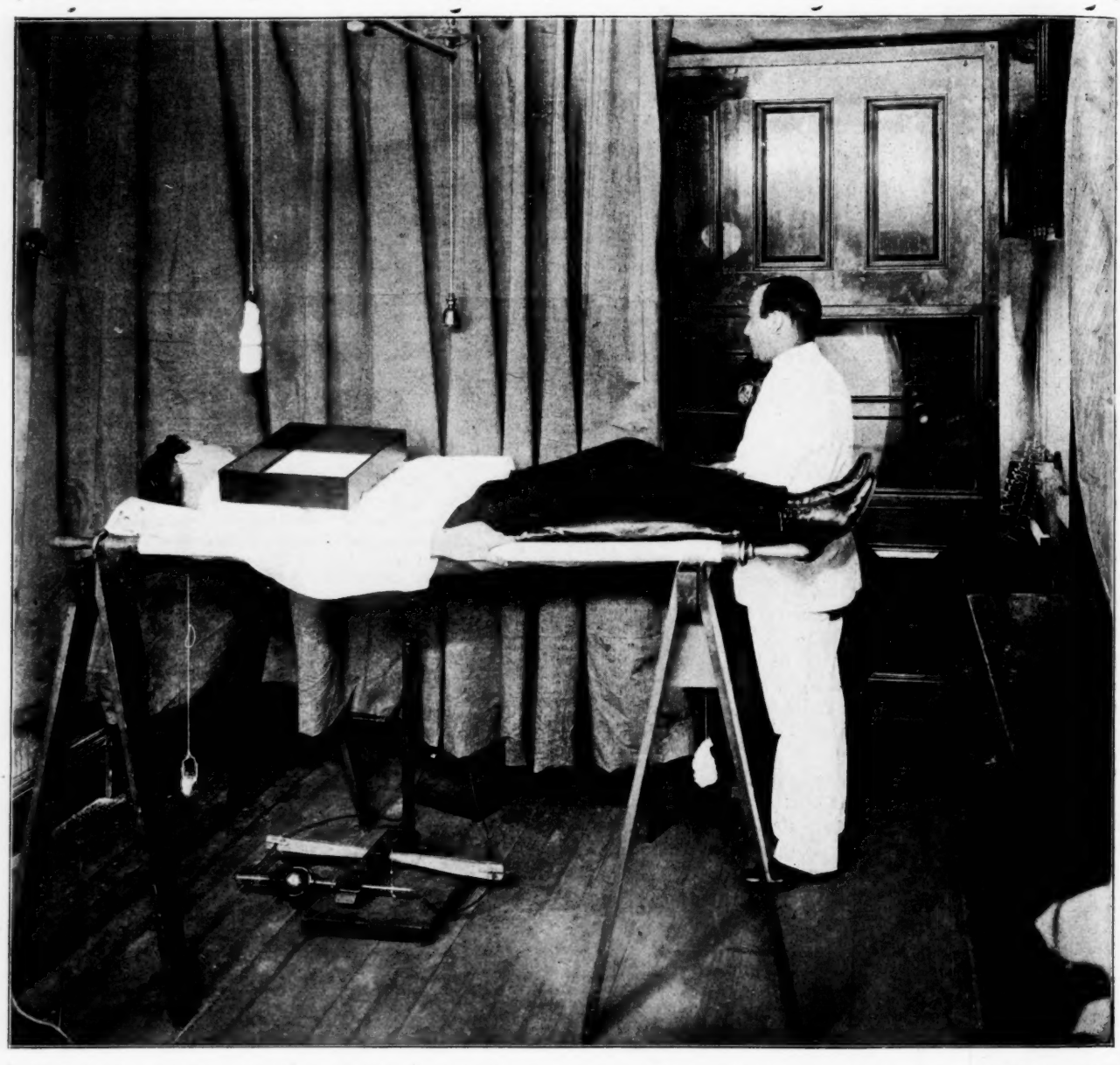
*Presented to the Section on Practice of Medicine, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

be easily cooled by passing a stream of water through its interior. These vacuum tubes are the only ones, so far as I am aware, that withstand a very powerful exciter.

To avoid X-ray burns, two simple precautions should be taken: 1, the tube should be placed at some distance from the patient—in examining the chest it is well to have the fluorescent screen 3½ feet from the tube; 2, an aluminum screen, which should be grounded, should be interposed between the tube and the patient. I speak of the question of burns because, in the early use of the X-rays, cases of such burns were reported, and these cases have given rise to the idea in the minds of many that there is danger attending X-ray examinations, but if the precautions just mentioned are taken, there is no danger whatsoever. X-ray examinations have been in use at the Boston City Hospital about three years. Some three thousand such examinations have been made there, and no one has suffered any inconvenience even from them.

There are two ways in which X-ray examinations may be made. One is by means of X-ray photographs and the other by the fluorescent screen. Each has its special field of usefulness.

In taking X-ray photographs it is necessary to know where to place the Crookes tube in relation to the photographic plate, in order to get a good picture and to bring out most advantageously the particular part it is desired to see. This requires practice and an elementary knowledge of physics. It is needless to say that for many photographs the tube should be three feet or more from the plate, in order to avoid distortion and obtain good definition.



Method of examining the thorax with fluorescent screen One cord over patient varies the amount of light, the other shuts it off. Aluminum screen over Crookes' tube not shown. Curtain drawn aside to show end of case. House officer standing at the foot of the patient shows proportions of apparatus.

X-ray examinations with the fluorescent screen are more readily made in certain cases, in the chest, for example, than by an X-ray photograph, and the screen has the further advantage of permitting the physician to follow the movements of the heart and lungs during respiration. The outlines of the heart, lungs, and diaphragm are also more sharply defined on the screen

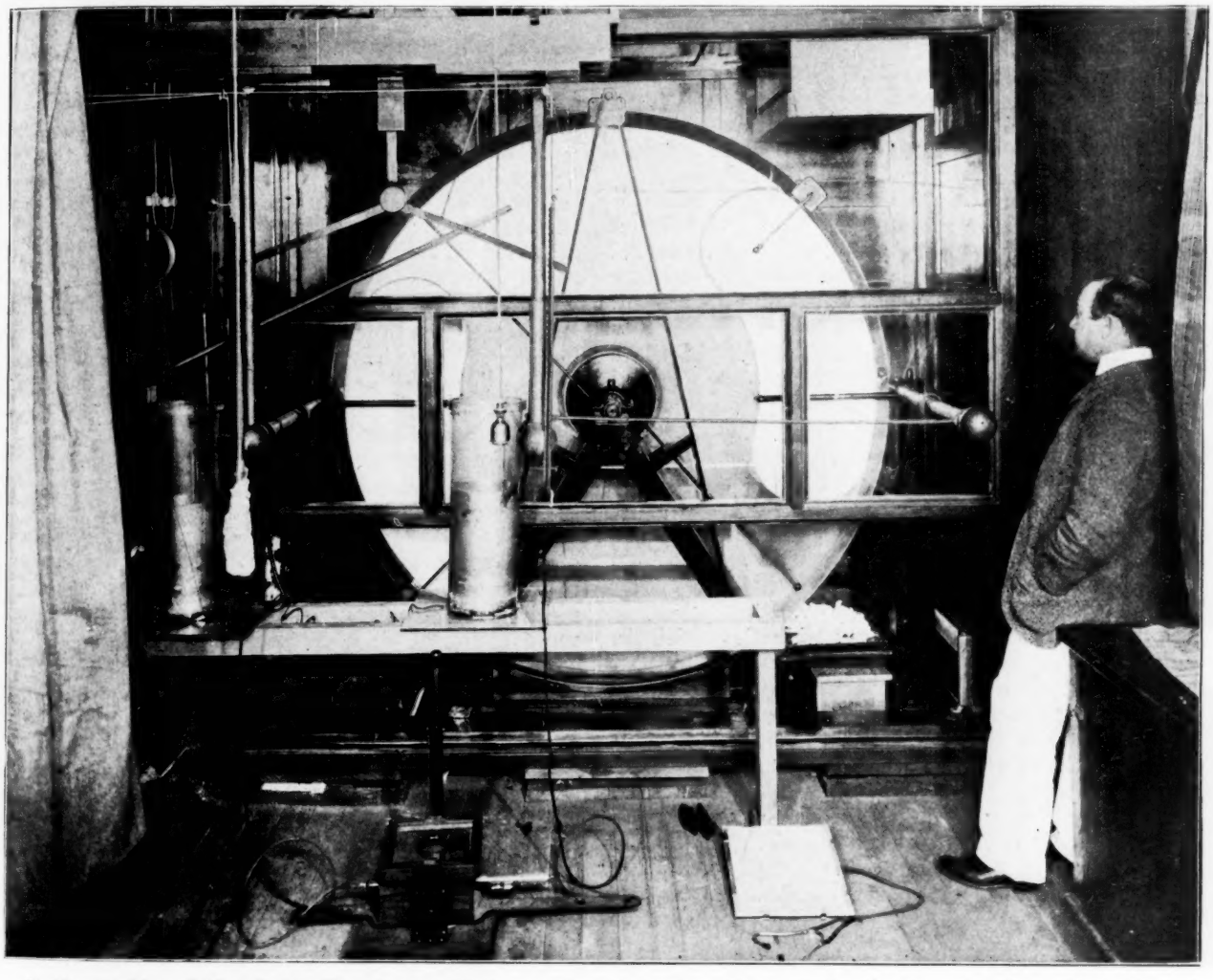
than in an X-ray photograph. The tube, in chest examinations, should be 3½ feet away from and under the median line, where it is crossed by the line joining the fourth ribs. Records of examinations made with the fluorescent screen may be kept by tracing on the skin the outlines seen on the screen, and then transferring them to tracing cloth.

If the outlines are drawn on the skin during full inspiration, the physician must appreciate that it moves somewhat and by this movement the position of the horizontal lines especially may be a little affected. I pointed this out in 1896. But the lines may be drawn on a piece of paper suitably supported just above the patient, or on a transparent film or thin glass placed over the fluorescent screen, instead of on the skin, thus eliminating the error that might arise from the movement of the skin, if especial care is not taken. By the latter method it is often unnecessary to remove the clothing.

Examinations, especially of the chest, may be made from the front, from behind, transversely, and diagonally with the fluorescent screen. To examine a part while the body is being turned is not possible by photography, but it can be done with the screen. When a picture of the bones is desired, the X-ray photograph has advantages. Speaking generally, however, the examination with the fluorescent screen is the more satisfactory method.

The surgical uses of the X-rays are many and need not be considered before this Section. I will merely describe a simple method of locating foreign bodies in all parts of the body, including the head.

Everything being in readiness, the fluoroscope is placed directly on the thigh—let us suppose a bullet is there—and the examination is begun. After looking a moment the spark-gap may be changed a little in order to increase or diminish the light, as by means of this variation more can be seen, certain things showing better in a bright light and others in a less brilliant one. With the bullet it is generally well to use a considerable amount of light. After the fluoroscope has been moved about a little and the shadow of the bullet found, the spark-gap may again be changed in order to get as clear a shadow as possible. The physician, while still looking through the fluoroscope, then makes, with a suitable pencil[1] a mark over the place where the bullet



Static machine designed by Francis H. Williams, M.D. Four glass plates six feet in diameter, four glass plates six feet four inches in diameter. Speed may be varied from 50 to 275 revolutions per minute. House officer on right of picture suggests proportions of machine.

[1] The pencil consists of a metal tube six inches long and about one-quarter of an inch in diameter, one end of which carries a crayon suitable for marking on the skin. The metal tube casts a shadow on the fluorescent screen and its point can therefore be readily followed. To prevent the marks from being rubbed out. When the skin is washed with an antiseptic for operation, a stick of nitrate of potassium may be used instead of the crayon, or the marks may be retouched with tincture of iodin.

seems to be, and directly under the fluoroscope; he then makes a corresponding mark on the side of the thigh nearest the Crookes tube, over the shadow of the bullet, and draws 1 and 1 by the side of each of these two marks. Then, while still looking through the fluoroscope, the Crookes' tube should be moved, horizontally, a few inches to and fro in order to learn how deeply the bullet is embedded, for if the shadow of the bullet moves considerably in the fluoroscope, the bullet is some distance away; if it moves very little it must be near the fluoroscope and the surface of the skin; if far from the surface, its shadow will be ill-defined; if near, it will be very sharply defined. Next, the patient should be turned so as to allow the physician to look through the thigh in a direction about at right-angles to that first taken, and, as before, a mark should be made with the pencil over the place where the bullet seems to be, both when the point of the pencil is held directly under the fluoroscope and on the side of the thigh nearest the Crookes tube. These points should be marked 2 and 2, and the bullet will be found at the point where the line drawn from 1 to 1 intersects that drawn from 2 to 2. I have used this method for locating bullets in different parts of the extremities, and in the neck, thorax, back and head, and usually the situation of the bullet is readily determined by this means. The first bullet I located in this way was in April, 1896. Of course, if it is more convenient to move the tube into another position this may be done instead of turning the patient.

For physicians, the most useful field at present lies in the thorax. There X-ray examinations aid us to detect most aneurysms of the thoracic aorta, central pneumonia, emphysema, early pulmonary tuberculosis, fluid in the chest, as in pleurisy or empyema, pneumopyothorax, etc. In cases where we are in doubt as to the cause of dulness in the lower part of the chest, and hesitate between a pleuritic effusion or a thickened membrane, for example, an X-ray examination can establish the fact that fluid is not present, for if there is no fluid the outline of the diaphragm is clearly defined on the fluorescent screen.

In diseases of the lungs X-ray examinations with the screen have an advantage over percussion, in that changes in the central portion of the lung are seen by their means, as in central pneumonia, whereas percussion is limited to the more superficial portions of the lungs. But the value of a method depends to some extent on the frequency with which the diseases where it is of use are encountered. This method then is especially valuable in pulmonary tuberculosis, as the disease is of such common occurrence. We may frequently recognize, on the fluorescent screen, abnormal appearances in the lungs before physical signs have led us to suspect the condition of these organs. We can define the extent of the disease, watch its progress or improvement, and question the trustworthiness of physical signs when they are not confirmed by X-ray examinations. It is evident, therefore, that the X-ray examinations assist us to give our patients better advice, particularly as regards their going away or remaining at home.

In acute miliary tuberculosis the fluorescent screen may frequently direct us as to a correct diagnosis where this disease would otherwise be overlooked. I have, however, so often spoken of the value of X-ray examinations in pulmonary tuberculosis that it is unnecessary to go into this subject further on this occasion.

Hydatid cyst of the lung, new growths, an encysted pleurisy, abscess of the lung, calcification of the pleura, may be located by X-ray examinations.

Tumors of the esophagus may in some cases be recognized; in the act of swallowing there is an upward movement of the shadow on the fluorescent screen which assists in making the tumor distinguishable. In the throat we may easily recognize the larynx, the trachea, cartilages, and the hyoid bone, by an X-ray photograph, and in the head we may readily follow both the inner and the outer side of the skull, and recognize bony growths in parts of its inner surface, or see depressions of the skull. In one case a tumor of the brain has been reported which was recognized by means of an X-ray photograph, and its presence was confirmed by a post-mortem examination. The skull of this patient was unusually thin.

In the abdomen we may, under favorable conditions, see on the screen the outline of the spleen, liver, and left kidney. By giving subnitrate of bismuth—which is opaque to the rays—with a meal, the outline, position, and size of the stomach may be seen, and its diminution in size during the process of digestion and the changes in outline during its peristaltic movements may be followed. Experiments on this subject, which Mr. W. B. Cannon made with me in 1898, will be published, I hope, before long. If the stomach or large intestine be distended with some gas they show as light areas on the screen; the sigmoid flexure and descending colon for example in detail. By this method these and adjacent organs may be examined.

The kidneys, when they contain certain calculi, offer an excellent field for diagnosis by means of X-ray photographs. For two or more years this field of usefulness has been explored and a number of cases of successful location of certain renal calculi have been reported, in which the diagnosis has been confirmed by finding the calculi by operation.

It seems necessary to repeat the warning which I gave more than two and one-half years ago, that we are not likely to recognize all forms of renal calculi by means of X-ray photographs, and too sweeping assertions as to their universal application in this respect should be received with caution. Some time ago I published a reproduction of an X-ray photograph that I made in 1896, of calculi containing phosphates, oxalate of calcium, and uric acid, which showed that calculi made up of organic substances, such as uric acid, do not cast a shadow which differs much from that cast by the soft tissues, whereas those containing inorganic or mineral salts, such as phosphate or oxalate of calcium, cast a marked shadow. The simple inference is that when by an X-ray photograph we get evidence of a renal calculus, we may safely predict that it contains mineral salts, but where no evidence of a calculus is found by the X-ray photograph, we are not justified in asserting that one is not present, for there may be one made up chiefly of organic matter—the most common form—which has not been revealed by the photograph. Further, we should bear in mind the relatively greater frequency of calculi having organic matter rather than mineral constituents.

Gall-stones are unfortunately of such a composition that they do not cast much shadow and do not, therefore, offer a good opportunity for detection by this method.

In the pelvis we may recognize the presence of bony deformities, by means of an X-ray photograph, and determine the size of the openings, and whether or not the pelvis is normal; this field will prove a useful one for study by obstetricians. One case is reported where an X-ray examination assisted in making the diagnosis of

extra-uterine pregnancy, and this diagnosis was confirmed.

Gout and rheumatism may be distinguished from each other by means of an X-ray photograph.

In acromegaly the progress of the disease and improvement under treatment may be followed by means of X-ray photographs. One case of this disease is reported in which an X-ray examination showed that there were no changes in the bones of the hands.

The arteries also offer a field for these examinations. In 1896 I showed photographs in which certain normal arteries could be seen, and this encouraged me to study this method with reference to arteriosclerosis; when the arteries are calcified they may of course be readily photographed. We may also be led to suspect arteriosclerosis by observing the size of the heart on the fluorescent screen, and may be enabled to estimate in part the progress of the disease in some cases by the amount of enlargement of the left side of the heart; we should be able to recognize the later stage of the disease when the right side has likewise become enlarged.

A calcified aorta near the heart, in one of my patients, cast a dark shadow on the fluorescent screen and was afterward found at the post-mortem examination.

An enlarged pulmonary artery in persistence of the ductus arteriosus may be seen on the screen.

In diseases of the heart the fluorescent screen gives us a means of determining the size, position, mobility, and action of this organ more fully and more accurately than has hitherto been possible. We may not only follow the outlines of the heart more completely than before, but we may distinguish enlargement of the left or of the right ventricle; further, we may also, for example, follow the pulsation of the right auricle as well as of the left ventricle, and we may distinguish enlargement of the pulmonary artery in certain conditions. In aortic insufficiency an abnormally extensive excursion of the left ventricle between systole and diastole may be recognized. The irregular, weak and strong contraction of the ventricle in some cardiac diseases may be followed, and the improvement in the action of the heart noted after the use of digitalis. A diminution in the size of the heart in cardiac disease may be seen to follow rest and digitalis. A transposed heart is easily recognized.

Since 1896 I have urged the more general use of X-ray examinations for infants and children, and I desire to take this opportunity to direct attention to the readiness with which these examinations may be made in young patients. Not only the thorax, but the head and the various organs in the abdomen may be more easily examined than in adults. It is not necessary to excite the child by removing the clothing. Infants may be examined with the screen, or X-ray photographs may be taken while they are asleep.

Clinical Report.

ADENOMA OF THE URETHRA.

BY G. FRANK LYDSTON, M.D.

Professor of the Surgery of the Genito-Urinary Organs in the Medical Department of the University of Illinois.

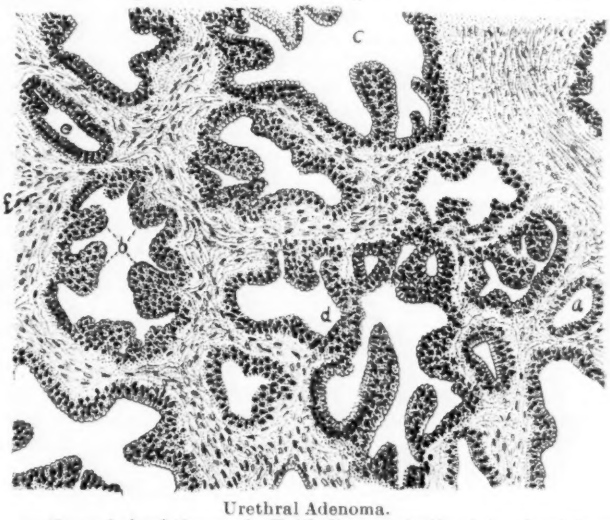
CHICAGO.

The following unusual case of urethral tumor is especially interesting as showing the possibility of the existence of a neoplasm of considerable size in the lower urinary way without producing obstruction to the urinary outflow.

W. H., aged 23, a furniture dealer, presented himself with the following history: Heredity good; denies venereal disease of any kind; has drunk to excess at times, but is not a constant drinker; has had no injury so far as he can remember. Three years ago he began to have pains in the hypogastrium and frequent micturition. Despite treatment of various kinds these symptoms have persisted and grown steadily worse. The symptoms have been intermittent, lasting a week or two and then for a time ceasing altogether. There is now pain and burning at the head of the penis. All the symptoms are worse when he gets about actively. During the week before consulting me, the symptoms had been very annoying. The appetite is good, the bowel function normal, and the urine approximately normal, save for deep urethral shreds, although the patient states that it has been very cloudy at times. There has never been any hematuria. There has been no polyuria, according to the history, and at no time lumbar pain.

Urethral Adenoma.

Exploration showed the bladder to be free from stone. The prostate was enlarged and tender and evidently the seat of chronic inflammation. There was no organic urethral obstruction, but great pain and spasm of the membranous urethra was excited by the passage of the instrument. It so happened that my battery was not in working order, hence no urethroscopic or cystoscopic examination was made. The condition seemed to be clearly chronic inflammation of the prostate and deep urethra, with hypertrophy of the membranous urethra as a consequence of frequent and spasmodic micturition. As the patient was from out of town and had already received very intelligent and persistent treatment, I



Urethral Adenoma.

a—Normal gland tissue. *b*—Epithelium projecting into gland, forming papillæ. *c*—Cystic gland. *d*—Epithelium heaped up in single layer. *e*—Columnar epithelium.

suggested perineal cystotomy with dilatation of the vesical neck as likely to afford the best and speediest results.

An ordinary perineal boutonniere was made and the bladder entered with the index finger, the vesical neck being thoroughly dilated While making a careful digital examination of the perineal and deep urethra, I felt a little irregularity of the urethral surface on the right lateral and inferior aspect of the bulbous region. While

examining this carefully, it began to detach itself from the urethral lining, assuming a tumor-like aspect. I proceeded to dissect this up with the finger and finally freed a distinct, somewhat lobulated tumor that seemed to proceed from the base of the bulbous urethra on the right side. There appeared to be a narrow prolongation of the growth that was gradually lost in a distinct minute opening in the triangular ligament, corresponding approximately to the location of the right Cowper's duct.

The tumor was removed without difficulty and was evidently adenoma, a diagnosis that was confirmed by the histologic study of the neoplasm. Quite a quantity of the glandular tissue broke down under the finger and came away as débris. Two distinct lobes, however, were removed intact. The illustrations (Figs. 1 and 2) show their natural size. The mass, of which the specimens shown formed the major part, was so closely adherent to the urethral wall that the instruments did not catch on it in their passage. Strange to say, the growth seemed to have developed in the direction of the wall of the urethra, rather than toward the lumen. The bed of the neoplasm formed a distinct cavity. Recovery was uninterrupted, and when the patient was last heard from he was free from all symptoms save a little increase in the frequency of micturition.

Therapeutics.

Exaggerations of Treatment in Diabetes.

In a recent lecture, says *Health*, Dr. Dieulafoy spoke of the reaction which had taken place against over-treatment in diabetes. He divides the cases into two categories, calling the first the mild (*petit*) and the second the severe (*gros*) form. The former includes those in which the quantity of sugar does not exceed 10 to 15 gm. in the twenty-four hours; these have no marked import; and may pass unnoticed for a long time, because of the absence of such tell-tale signs as carbuncles, etc. In the severe form the patient urinates from 100 to 200 gm. or more of sugar. In spite of this enormous loss, these patients are not necessarily more threatened than the others, and there are those among them who, without any precautions, stand this sugar loss quite well. Attention is drawn to the co-existence of azoturic with saccharine diabetes. As to treatment, if 25 to 30 gm. of sugar is passed, it is not necessary to resort to the severe régime so often forced on patients. The chief point is to see to it that the patient does not lose flesh. It is a mistake to restrict the diet to the extent to which it is often done. Antipyrin, gr. xv., given morning and night, with bicarbonate of sodium, gr. vii-viii, will show a disappearance from the urine of from 30 to 50 gm. of sugar within thirty-six hours. The speaker prefers, instead of Fowler's solution, the arsenate of sodium in solution of 3 cg. to 80 gm. of water, of which a teaspoonful is taken at each meal. He also believes that it is not necessary to suppress milk in the dietary because of the lactose it contains, but thinks it should be given. Lactose is not transformed into glucose. In the case of severe diabetes the patient should be allowed to drink freely to wash out the sugar instead of letting it accumulate. If antipyrin does not act well, we must tack about and give arsenate of sodium.

Drug Treatment of Acute Pleurisy.

Opium is a peculiarly potent remedy in this malady, says Butler, in the *Med. Standard*, April, 1899. By its action on the respiratory center the respirations are decreased in number, thus affording physiologic rest to the chest wall; its vasomotor action tends to relieve the pleural congestion by dilating the cutaneous vessels, and its narcotic effect relieves the pain, and allays the cough, thus meeting all the indications for which the external remedies are applied.

Indeed, the early administration of a quarter of a grain of morphin may so ameliorate an attack of pleurisy that the physician may be saved the vigorous external treatment which otherwise he might be compelled later to adopt.

The opiate may be given either per orem or hypodermically in the form of morphin, the latter method being preferable, especially when there is gastric irritation, and perhaps of additional potency when injected over the seat of pain.

The patient should be kept under the influence of this drug during the acute stages of the disease, the dose being determined by its result rather than by any arbitrary limit of dosage.

In conjunction with the opiate, one of the coal-tar antipyretics may be advantageously administered. They not only control the fever, but are powerful adjuvants to the analgesic action of opium, and in some cases accompanied by a rheumatic tendency they seem to have a marked and specific antirheumatic value, and according to some authorities should be invariably preferred to the salicylates. Of these drugs kryofin, phenacetin, antipyrin or acetanilid are preferable, in five to ten-gain doses every two or three hours, in powders or capsules.

Should malaria be a complicating condition, quinin may very properly be combined with the foregoing, though it is usually preferable to give the quinin alone.

While opium is the drug upon which greatest reliance is placed, yet the pain of certain mild cases of pleurisy may be effectually controlled by kryofin or one of the other antipyretics mentioned above, these being especially desirable in those cases in which for any reason opium is contraindicated.

If the pain is severe, with but moderate elevation of temperature not exceeding 102, he resorts to the hypodermic administration of morphin and gives the following prescription in preference to any of the coal-tar derivatives:

℞. Tinct. aconiti.....m. x
Spiritus etheris nitrosi.....3ii
Liq. potassii citratis.....ʒiii
Syrupi tolutani, q. s. ad.....ʒiv
M. Sig. Two teaspoonfuls every hour.

Treatment of Herpes Zoster.

J. A. Cantrell says, in the *Maryland Medical Journal*, that it is seldom necessary to use extreme measures in the treatment of this affection, as usually a local or constitutional reaction calls for special medication. External measures should be especially directed toward the avoidance of unnecessary friction and the rupture of the vesicles. If this occurs, the pain is increased. Internal remedies are called for in those types in which there is extreme constitutional depression, such as is described in the ophthalmic variety. For external application the author gives the following formulæ:

℞. Bismuthi subnitratis.....3i
Petrolatum vel. ungt. zinci ox.....3vii
M. Sig. Apply directly to the affected areas thrice daily.
℞. Salol.....3iss.
Ether.....ʒi
M. Sig. Apply with a brush directly to the lesions once, twice or thrice during the day.

℞. Morphinæ.....gr. i-ii
Lanolin.....ʒi
M. Sig. Apply several times daily.

Where there is extreme irritation and where the slightest touch of the clothing causes severe pain, collodion applied directly over the part may give relief.

Cough.

Dr. L. M. Taylor, Washington, D. C., writes to *Merck's Archives* that the following prescription has given general satisfaction in his practice:

℞. Chloralis.....gr. lxiv
Ammon carb.....gr. xxxii
Ext. ipecac fluidi.....3i
Spt. etheris nitrosi.....3ii
Syrupi picis liq.
Syrupi pruni virg.
Syrupi tolu
Tinct. opii camph., āā.....ʒi
M. Sig. Shake well and take a teaspoonful when cough is troublesome.

Remedies Influencing the Exudate.

Remedies which are believed to have some direct influence on the exudate, changing its character from fibrinous to a serous

nature, thus hastening absorption, are the iodids and the alkalies and, upon empirical grounds, the potassium, sodium or ammonium iodid may be given in moderate doses. Of the alkalies the ammonium compounds are most serviceable, and they may be used in various combinations, of which the following are examples, especially valuable if there be an associated cough.

℞ Ammonii chloridi
Ammonii carbonatis, āā.....3i
Tinct. cubebæ.....3iiss.
Syrupi tolutani, q. s. ad.....℥ii
M. Sig. Teaspoonful in water every three or four hours.

℞ Liq. ammonii acetatis.....3i
Ammonii carbonatis.....gr. xxx
Syrupi tolutani, q. s. ad.....℥iv
Spiritus etheris nitrosi.....3iv
M. Sig. Dessertspoonful in water every three hours.

Treatment of Pertussis.

The following collection of prescriptions for this disease may be of value at this season of the year.

℞ Bromoform.....gtt. xlviii
Olei amygdalæ expressi.....gtt. xx
Pulv. tragacanth.....3ii
Pulv. acacia.....3iv
Aquæ laurocerasi.....fl. 3iv
Aquæ destil., q. s., ad.....fl. 3xii
Half a teaspoonful of this mixture contains about two drops of bromoform. Sig. Give from one to four teaspoonfuls, in divided doses, per day and gradually increase to eight teaspoonfuls per day. —*Radias: Med. Record.*

℞ Bromoform.....fl. 3i
Tinct. tolu.....fl. 3ii
Syrup tolu.....fl. ℥i
Mucilage acaciæ.....fl. 3iv
Aquæ menthæ vir, q.s., ad.....fl. ℥iv
M. Mix the bromoform with the tincture of tolu, add gradually to a mixture of the syrup and mucilage, shake well, dilute with the spearmint water, and give a teaspoonful three times a day, gradually increasing until six or eight teaspoonfuls are taken in divided doses per day.—*Scoville: Med. News.*

℞ Resorcin.....gr. xxx
Antipyrin.....gr. xv
Tinct. belladonnæ.....gtt. viii
Tinct. opii.....gtt. iii
Syrup codein.....fl. 3iiss
Syrup tolu.....fl. 3v
Aquæ destil.....fl. ℥iiss
M. Sig. Teaspoonful for infants; dessertspoonful for children from one to three years; tablespoonful for children over three years.—*Concetti: La Sem. Med.*

℞ Resorcini.....gr. xxv
Aquæ.....fl. ℥ii
M. Sig. Spray or apply with a throat brush to the glottis every four hours.—*Roskaw: Denver Med. Times.*

℞ Phenacetin.....3iii
Tinct. belladonna.....fl. 3ii
Whisky.....fl. ℥i
Fld. ext. chestnut leaves.....fl. ℥vi
M. Sig. Teaspoonful every three hours until the face flushes; then every three, four or six hours as needed to control the cough, in a child of 6 years.—*Lancaster: Florida Health Notes.*

℞ Antipyrin.....gr. viii-xvi
Ammonium bromid.....gr. xvi-xxxii
Ammonium chlorid.....gr. lxxx
Syrup, q. s., ad.....fl. ℥ii
M. Sig. Teaspoonful every three to six hours.—*Med. Record.*

℞ Tinct. digitalis.....m. xv
Antipyrin.....gr. xxx
Camphorated tinct. opium.....fl. 3i
Syrup tolu, q. s., ad.....fl. ℥ii
M. Sig. Half a teaspoonful three times a day.—*Koplik: Med. News.*

℞ Phenocol hydrochlorate.....gr. xviii-xc
Sugar.....3i
M. Sig. Make twelve powders and give one three times a day.—*Kobert: Med. Record.*

Therapeutic Hints.

The following practical suggestions by William Murrell are worth repeating.

1. The value of small doses of tincture of aconite, frequently repeated, in the treatment of amygdalitis and in the initial stage of febrile diseases.

2. The value of painting the chest and back with liquor iodi fortis—diluted if necessary with an equal quantity of the tincture—in all cases attended with cough.

3. The value of a pill of exsiccated ferrous sulphate in conjunction with the administration of purgatives in the treatment of anemia.

4. The value of grain doses of gray powder with an equal quantity of Dover's powder, from three to six times a day, in the treatment of syphilis.

5. The value of large doses of the iodids in the treatment of tertiary syphilis.

6. The value of large doses of bromid of potassium in the treatment of the "heats and flushes" and other symptoms from which women suffer about the time of the menopause.

7. The value of large doses of quinin in the treatment of supraorbital neuralgia, in the periodical febrile disturbances from which old malarial patients suffer.

8. The value of five grains of butyl-chloral-hydrate with one two hundreths of a grain of gelsemin in neuralgia of the fifth nerve.

9. The value of small doses of perchlorid of mercury in the treatment of infantile diarrhea when the stools are green, slimy and offensive.

11. The value of sulphid of calcium, in doses of a tenth of a grain, in the treatment of boils, carbuncles and abscesses.

12. The value of nitroglycerin and nitrite of amyl in the treatment of angina pectoris and allied conditions.

13. The value of alcohol in the treatment of fevers.

14. The value of flying blisters in typhoidal conditions.

To the above important tips we would add the following:

1. The value of small doses of arsenic in paroxysmal coryza of children; Fowler's solution in doses of one or two drops on an empty stomach in vomiting of drunkards; of arsenic in gastralgia, chronic ulcer of the stomach, chronic scaly skin diseases, as a respiratory and circulatory stimulant for the aged, in dysmenorrhea frequently noticed in women with a tendency to asthma or subject to chronic diseases of the skin, in pulmonary phthisis characterized by excessive expectoration and a slow degenerative process, and in albuminuria dependent on imperfect digestion of albuminuous substances.

2. The value of a dose of castor-oil in allaying the colicky pains of an infant, although it may not produce a movement of the bowels. The value of the remedy as a galactagogue.

3. The value of potassium bichromate in doses of 1/100 grain every hour or two, in aphonia and hoarsenes due to excessive action of the vocal cords or resulting from an acute cold.

4. The value of potassium chlorate, one grain, and tincture of chlorid of iron, ten minims, every two hours in the treatment of ptyalism.

5. The value of hypodermic injections of a solution of camphor in ether as a rapid and powerful heart stimulant.

6. The value of oil of eucalyptus as a gastro-intestinal and genito-urinary antiseptic.

7. The value of small doses of corrosive chlorid of mercury (1/100 grain or less in marasmus); of small doses (1/60 to 1/40 grain) in chronic diarrhea.

8. The value of sipping water as hot as can be swallowed to stimulate the heart.

9. The value of opium in cardiac asthma, as a vasodilator, given in conjunction with digitalis in senile hearts.

10. The value of 3 to 5 per cent. solution of acetic acid as a disinfectant and antiseptic in obstetric practice.

Pruritis of Scrotum.

℞ Hydrarg. bichlorid.....gr. vii
Alcohol
Aquæ chamomil, āā.....3vi
Chloroformi.....gtt. v
Aquæ camphoræ, q. s. ad.....℥iii
M. Sig. Apply as a lotion.

—*Leistikoff.*

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

American Journal of the Medical Sciences, November.

1.—*Paralysis Agitans and Sarcoma. Charles L. Dana.
2.—*Study of Case of Family Periodic Paralysis. John K. Mitchell.
3.—*Kraurosis Vulvæ. J. M. Baldy and H. L. Williams.
4.—*Immediate and Remote Effects of Athletics on Heart and Circulation. Alfred Stengel.
5.—*A Short Umbilical Cord as a Cause of Dystocia. Samuel M. Brickner.
6.—*Experimental Study of Absorption of Strychnin in Different Sections of Alimentary Canal of Dogs. S. J. Meltzer.
7.— Critical Summary of Literature of Splenic Pseudoleukemia (Anemia Splenica; Spleno-Megalia Primitive). Bertram W. Sippy.

Annals of Gynecology and Obstetrics, October.

8.—*Edema and Elephantiasis of External Genitalia, following Removal of Inguinal Glands. C. A. Hamann.
9.—*Puerperal Eclampsia: Study of Seventeen Cases in Country Practice. J. F. Ford.
10.— Obstructed Nasal Respiration, Including Adenoid Vegetations. Geo. H. Leland.

Pennsylvania Medical Journal (Pittsburg), October.

11.— Medical Achievements of Present Century: Retiring Presidential Address. J. Warren Roop.
12.— Chronic Renal Disease: Etiology and Pathology. E. G. Matson. Prognosis and Treatment. H. A. Hare.
13.— Defects of our Present Methods of Teaching Anatomy in our Medical Schools. Edmund W. Holmes.
14.— Specific Treatment for Typhoid Fever. C. D. Miller.

Occidental Medical Times (San Francisco), October.

15.— Commercialism in Medicine. R. F. Rooney.
16.— Two Cases of Spontaneous Rupture of the Heart with Demonstrations of Specimens. A. W. Hoisholt.
17.— Rachitis. George L. Eaton.

American Medical Quarterly (N. Y.), September.

18.—*Functional Cardiac Murmurs. A. Jacobi.
19.— Appendicitis: Its Surgical Treatment. Joseph Price.
20.—*Cystoid Disease of Testicle: Teratoma Testis (?). F. R. Sturgis.
21.—*Does Sepsis Play a Prominent Causative Rôle in the Production of Puerperal Insanity? Edward N. Brush.
22.—*Heart Disease from an Obstetrical Point of View. Adam H. Wright.
23.— Experiences in Intestinal Surgery. Matthew D. Mann.
24.—*Hygiene of Bedroom and Bedstead. Lawson Tait.
25.— Newspaper Medicine. Nelson W. Wilson.

New York Lancet, October.

26.— Management of Difficult Breech Labors. Adam H. Wright.
27.— Hypodermic Injection of Quinin in Malaria. W. Young.
28.— Diet of Typhoid Fever and the Typhoid State. W. H. Dickinson.
29.— Intestinal Obstruction. R. C. Elsworth.
30.— Treatment of Abdominal Palpitations. Willoughby Wade.
31.— Treatment of Coryza. William E. Burton.
32.— The Surgical Sequelæ of Influenza. J. Warrington Howard.
33.— Parturition Complicated by Fibroids of Uterus; Postpartum Hemorrhage; Infusion; Recovery. A. J. Helm Montague and C. B. Moss Blundell.
34.— Note on Etiology of Rickets. Chas. Elgood.
35.— Convulsions in Infancy. A. M. Gossage and J. A. Coutts.

Obstetrics (N. Y.), October.

36.— Pelvic Abscess and Pyosalpinx after Abortion. William H. Wathen.
37.—*Observations on Management of Normal Labor. George P. Shears.
38.— Physical Diagnosis in Obstetrics. E. A. Ayers.

Woman's Medical Journal (Toledo, Ohio), October.

39.— The Woman Physician: Her Future. Frederick Peterson.
40.— Obstetrics in Burma. Marie M. Cote.
41.— Fistula in Ano; Report of Three Cases. Mary E. Bates.

Northwestern Lancet (St. Paul, Minn.), October 15.

42.—*Urea: Its Clinical Importance. D. Edmund Smith.
43.— Some Inflammatory Diseases of Bones, with Report of Cases. A. E. Benjamin.
44.—*Tale of a Worm and How to Kill It. George R. Patton.
45.— Carcinoma of Large Intestines. E. D. Keyes.
46.— Traumatic Endocarditis. C. H. Hunter.
47.— Discussion of the Walcher Posture. R. E. Cutts.

Canadian Journal of Medicine and Surgery, November.

48.—*Massage and the Relief of Eye-Strain in the Treatment of Glaucoma. George M. Gould.
49.—*Tuberculosis and Insurance. John Hunter.
50.—*Floating Kidney Simulating Diseases of the Genital Organs in Women. A. Lapthorn Smith.
51.—*Observations on Relation of Uterus to Thyroid Gland. Charles R. Dickson.
52.— Antinosin in the Treatment of Chronic Ulcers of the Leg. A. J. Harrington.

Kansas City Medical Record, October.

53.— Are Subjected Symptoms Properly Interpreted? C. A. Dannaker.
54.— Septic Peritonitis. Andrew L. Fulton.
55.— Pathology and Treatment of Locomotor Ataxia. W. F. Kuhn.

Journal of Alumni Association of College of Physicians and Surgeons (Baltimore), October.

56.—*Use and Abuse of Nitrate of Silver in Treatment of Ophthalmia of New-Born. Harry Friedenwald.
57. High Amputation of Cervix and Vaginal Suture Preliminary to Abdominal Hysterectomy, with Report of Case. W. Wayne Babcock.
58.— Mechanism of Axis-Traction Forceps. William S. Gardner.
59.— Baltimore as a Center of Post-Graduate Medical Study. T. J. Murphy.
60.— Treatment of Syphilis by General Practitioner. Harvey P. Jack.

Philadelphia Monthly Medical Journal, October.

61.—*Presidential Address at Thirty-second Annual Meeting of Canadian Medical Association, Toronto, August 30, 1899. Irving H. Cameron.
62.— Typhoid Infection without Lesions in Intestines; Case with Remarks. A. McPhedran.
63.—*How to Deal with Consumptive Poor. E. J. Barrick.
64.—*"Christian Science." J. H. Richardson.
65.—*Massage and Relief of Eyestrain in Treatment of Glaucoma. George M. Gould.
66.—*Experience in Formaldehyde Disinfection. F. Montizambert.
67.—*Complications and Treatment of Fracture of Base of the Skull. J. M. Elder.
68.—*Recurrent Paralysis of Oculomotor Nerve. J. W. Stirling.
69.—*Observations on Adenoids and Enlarged Tonsils and their Removal. D. J. Gibb-Wishart.
70.—*Case of Subcutaneous Emphysema. Frederick Fenton.
71.—*Report of Case of Penetrated Gunshot Wound of Abdomen with Lesions of Intestines Successfully Treated by Immediate Operation. Norman E McKay.
72.—*Case of Diffuse Hypertrophy of Breasts. James Bell.
73.— Pneumothorax from Gas-Producing Bacteria. F. G. Finley.
74.—*Results already Achieved at the Muskoka Cottage Sanatorium. J. H. Elliott.
75.—*Observations on Relation of Uterus to Thyroid Gland. Charles R. Dickson.
76.— When is Justifiable Abortion Indicated? Clarence E. Ide.
77.— Home Treatment of Phthisis by Hygienic or Open-Air Method. Albert Abrams.
78.— Clinical Observations on Traumatic Cataract. J. H. Woodward.

Peoria Medical Journal, October.

79.— Chronic Catarrhal Infections of Upper Air-Passages. Chas. H. Brobst.
80.— Surgical Experiences with Report of Cases. G. E. Luster.

Alabama Medical and Surgical Age (Birmingham), October.

81.— Treatment of Urethral Stricture. W. M. Jordan.
82.— Whooping-Cough with Cerebral Hemorrhage. J. C. Abernathy.
83.— Puerperal Septicema. W. H. Williams.

Toledo Medical and Surgical Reporter, November.

84.— Pancreatic Cysts with Report of Case. Julius H. Jacobson.
85.— The Bicycle as a Hygienic and Therapeutic Factor. H. E. Smead.
86.— The Chlorotic Condition and How Best Corrected. J. D. Ely.

Inter-State Medical Journal (St. Louis, Mo.), October.

87.—*Some Points in Practical Abdominal Surgery. A. C. Bernays.
88.— Nephrolithiasis. A. H. Cordier.
89.— Functional Constipation and its Treatment. A. J. Jenkins.
90.— Quick Method to Cure a Cold in the Head. A. S. Barnes.
91.— Intestinal Antiseptics. Burney Yoe.

Southern California Practitioner (Los Angeles), October.

92.— When Should the Eye be Enucleated for the Prevention or Cure of Sympathetic Ophthalmia. B. F. Church.
93.— Alimentary Hygiene. Frank Gordon.
94.— Some Features of the Bad Nauheim Treatment. W. Jarvis Barlow.
95.— Carbolic Acid Poisoning. Treatment. W. H. Mitchell.
96.—Diet in Typhoid Fever. Fred C. Shurtleff.
97.— In the San Jacinto Mountains. Walter Lindley.

American Journal of Surgery and Gynecology (St. Louis, Mo.), October.

98.—*Hernia Following Abdominal Operations. Prevention and Cure. A. Lapthorn Smith.
99.—*Observations on Relation of Uterus to Thyroid Gland. Charles R. Dickson.
100.—*Surgery Among the Insane: Its Difficulties; Its Advantages; Its Results. A. T. Hobbs.
101.— Mania and Melancholia Due to Pelvic Trouble. T. K. Holmes.
102.— Kraurosis Vulvæ with Notes on Three Cases. H. Meek.
103.— Some Cases of Obstruction of the Bowel. James Perrigo.
104.— Drug Habit Following Surgical Operations. C. E. Patterson.
105.— The Soldier and Surgeon. Col. G. Ryerson.

Kingston Medical Quarterly (Ont.), October.

106.— The Late Mr. Lawson Tait. R. W. Garrett.
107.— President's Address, Kingston Medical and Surgical Society. John Herald.
108.— Imperforate Hymen. C. B. Dyde.
109.— Distribution of Anthrax in Ontario. W. T. Connell.
110.— Notes on the Use of Normal Salt Solution. I. Wood.
111.— Indigestion. G. W. Mylks.
112.—*Traumatic Rupture of Bile-Duct. R. W. Garrett.

Cleveland Medical Journal, October.

113.—*Rational Treatment of Catarrhal Conditions with the Sinusoidal and Other Electric Currents. W. F. Brokaw.
114.—*Operative Treatment of Varicose Ulcers, and a new Local Application for Inoperable Cases. F. E. Bunts.
115.—*Acute Dilation of Stomach. Charles F. Hoover.
116.— Case of Ectopic Gestation. Charles H. Tanner.
117.—*Case of Pyelitis with Renal Calculi Complicating Pregnancy: Pain and Tenderness on Side Opposite the Main Lesion. L. B. Tuckerman.

Medical Fortnightly (St. Louis, Mo.), October 16.

118.— Aortitis and Angina Pectoris. Dr. Lancereaux.
119.— The State vs. the Child. M. V. Ball.
120.— Physiology: Ductless Gland, Spleen. A. L. Benedict.
121.— Scattered Leaves from a Physician's Diary, No. 10: Two Days in Spain. Albert Abrams.

North Carolina Medical Journal (Charlotte), October 20.

122.—*New Method of Inflating the Middle Ear. Lucien Lofton.
123.—*Old Age and Modifications in the Course of. M. E. Nuckols.

Medical Age (Detroit, Mich.), October 25.

124.—*Pneumonia in Infants, Diagnosis and Treatment. W. P. Northrup.
125.—Laryngologic X-Ray Work. Wadsworth Warren.

Columbus Medical Journal, October 5.

126.—Excessive Myopia: Its Causes and Treatment with Report of Case. Andrew Timberman.
127.—Etiology and Diagnosis of Typhoid Fever. D. N. Kinsman.
128.—Cerebrospinal Meningitis. Henry Baldwin,
129.—The Average Man's Stomach. Charles H. Merz.

Medical News (N. Y.), November 4.

130.—*Mountain Fever. E. Stuver.
131.—*Yellow Fever as a Scourge in the United States. G. Heustis Fondé.
132.—*Congenital Tumors of the Fingers. Charles E. Fairman.
133.—Tubal Pregnancy and Dermoid Cysts; Report of Case. I. B. Perkins.

Medical Record (N. Y.), November 4.

134.—*Fourth Hitherto Undescribed Disease of Ovary; Colloid Degeneration. Mary A. Dixon Jones.
135.—*Congenital Hernia of Umbilical Cord. W. B. Coley.
136.—*Headaches Due to Eye Strain. James Cole Hancock.
137.—Lip-Reading: An Aid for the Incurable Deaf. Mrs. Cora D. Gorton.
138.—Antiseptic Gauze. G. W. Tyrrell.
139.—Volvulus of Cecum. G. H. Coombs.

Boston Medical and Surgical Journal, November 2.

140.—*Acute Abdominal Symptoms Demanding Immediate Surgical Intervention. Maurice H. Richardson.
141.—*Carcinoma Under Age of Thirty. Charles Greene Cumston.
142.—Case of Adenocarcinoma of Body of Uterus, Simulating Submucous Fibromyoma. W. L. Burrage.
143.—Case of Tetany. Franklin Warren White.
144.—Case of Gastric Tetany. Ralph C. Larrabee.
145.—Case of Ataxic Paraplegia Developing Under Circumstances of Unusual Interest. J. W. Courtney.

Maryland Medical Journal (Baltimore), November 4.

146.—The Milkman's War. John S. Fulton.
147.—*Mercurial Poisoning and Amalgam Fillings: a Medical View; the Dental Aspect. Richard Grady.

Medical Review (St. Louis, Mo.), November 4.

148.—Plea for Treatment of Typhoid Fever by Cold Baths. Charles Shattinger.

New York Medical Journal, November 4.

149.—*How to Preserve as Permanent Specimens Casts Found in Urine. L. Napoleon Boston.
150.—*Medical History of Sir Walter Scott. Roberts Bartholow.
151.—*Pathology and Therapy of Cancer, with Special Reference to Cancer of Stomach. Augustus C. Bernays.
152.—*Home Modification of Cows' Milk for Infant Feeding. Henry Dwight Chapin.
153.—Notes on Urethral Catheterism, Catheters, and Bougies. J. W. S. Gouley.
154.—The Sheldon Murder Trial. A Review of the Medical Evidence Relating to Pistol-shot Wounds of the Head. Charles Phelps.
155.—*Diagnosis of Typhoid Fever. A Discussion at the New York State Medical Association, Oct. 25, 1899. William Osler.

Cincinnati Lancet-Clinic, November 4.

156.—Correction of Refraction in Myopia. Charles A. Lester.
157.—Acute Tonsillitis, etc.; Treatment and Prophylaxis. W. L. Bullard.

AMERICAN.

1. **Paralysis Agitans and Sarcoma.**—Dana reports a case very completely in which paralysis agitans existed in connection with sarcoma, and reports examination of the spinal cord where there was found atrophy, some increase of connective tissue and various local degenerations. He reviews the pathology and pathogeny of paralysis agitans, rejecting the view that it is simply a premature senility and maintaining that it is in all probability due to some poison that has so affected the nerve-cells at some prior period of life that when degenerative changes begin to take place these less viable structures suffer. Without attempting to state what the primary infection may be, he suggests that it may be some autochthonous poison like that of rheumatism, which is one of the most frequent antecedents of the disorder.

2.—See abstract in JOURNAL, May 6, p. 1013.

3. **Kraurosis Vulvae.**—A case of this rare condition is here reported by Baldy and Williams, in which operation for the removal of the diseased parts was attended with a considerable degree of success. After a careful review of the literature, and thorough microscopic studies of the case, they assign to it an inflammatory origin, holding closely to the theory of Veit and Martin. While it is possible that there may be a primary trophic disturbance, they think this purely theoretic and without supporting evidence. The cause, they believe, is a local one, and the pruritus which is so constant in its beginning can not be ignored in its etiology. They recognize, however, that there must be some unknown factor either constitutional or local.

4.—See abstract in JOURNAL, May 6, p. 1013.

5. **Dystocia from Short Cord.**—The dangers of a short umbilical cord in delivery are, Brickner states: rupture at any point along its course, detachment of the placenta, inversion of the uterus, or, as has not been clearly pointed out, umbilical hernia in the child. The first two accidents are more common, the last two rare. Much depends on the position of the placenta, and a central or marginal insertion of the cord must be taken into consideration in estimating its actual length. The tensile strength and elasticity of the cord, according to Duncan and Lamare, are not sufficient to prevent its rupture under a tension of eight or nine pounds, and its length for safety must be at least, according to Brickner's calculation, ten inches. The diagnosis of the condition is based on the following symptoms: 1, recession of the head in the intervals of pains; 2, arterial bleeding during and between uterine contractions; 3, urination in small quantities in the intervals of pain, after the establishment of the second stage; 4, pain over the placental site, especially during the uterine contraction or during the application of forceps; 5, desire of the patient to sit up; 6, uterine inertia. The third of these symptoms is a new one first mentioned here, and was quite striking in the case reported in the paper. The treatment is dependent on the early diagnosis. By pressing down the fetus, the placental insertion of the cord is brought near the umbilical insertion, but this is not always feasible. Postural methods may be tried, and in breech presentation the cord may be tied as soon as the umbilicus is born. The use of forceps is clearly contraindicated.

6. **Strychnin.**—The studies of Meltzer on dogs seem to show that the absorbent power of the stomach is less for strychnin than that of any other part of the alimentary canal, that of the esophagus a little better. The absorption of the intestines seems to be about equal throughout, but the isolated rectum is shown to absorb at least as well as the small intestines, if not better.

8. **Elephantiasis of Labia.**—Hamann reports a case of femoral hernia operated on, during which operation the fat and some small saphenous lymph glands were also removed. The recovery was uneventful, but a few weeks afterward there was a painful swelling of the right labium majus, which subsided under treatment but has recurred a number of times since, leaving slight enlargement of the parts. He attributes the condition, which as a sequel to operation for femoral hernia was before unknown to him, to the removal of the glands and the fat tissue, causing interference with the lymph circulation. He explains his theory of the condition at length, with reference also to other observations parallel but not identical with his own.

9. **Puerperal Eclampsia.**—Cases in country practice were studied by Ford and the treatment of the condition is discussed. He finds chlorid of gold and sodium a most valuable remedy in this condition.

18. **Functional Cardiac Murmurs.**—After a general discussion of the subject, Jacobi offers the following conclusions as self-evident: 1. The diagnosis of deranged function in any organ is only a makeshift, and justifiable only as long as we are ignorant of the physical cause of that derangement. "Functional" is called the heart murmur, the anatomic cause of which we do not know. That is why a skilled diagnostician may recognize fewer functional murmurs than one who will not diagnose a heart disease unless we have all the symptoms, including dilation and hypertrophy. 2. The same disorders of the blood and nervous system in which heart murmurs are observed in the adult, do not cause them in the small infant. In the latter the heart is larger, more robust, and more powerful, and its contractions are more uniform and effective; its two ventricles are equally muscular, or nearly so, and the valves are smaller. Thus the greater frequency of murmurs in the adult is attributable to the physical condition of his heart, and should not be explained by a deranged function. 3. Even in the present limitation of our knowledge we should agree to call only those murmurs functional which are temporary, or intermittent, or variable in their character. They are met with in the neurotic and neurasthenic, in the (adult) anemic, sometimes in syncope or in chorea minor, and occasionally in rheu-

matism. Even here they should be recognized either as myocardial or as neurotic.

20. **Teratoma Testis.**—After reporting a case in detail, Sturgis reviews the general subject of cystoid disease of the testicle, and tabulates the histories of forty cases which he has collected from the English, German, French and Italian literature. About half of the cases apparently started from injury. In fifteen there was no apparent cause. Pain was present in about half of the cases, and the left gland was affected in the majority. The condition of the different portions of the organ are also noted, but do not seem with the number given to afford very definite results. The testicular substance was generally present, the tunics normal in most, which was also the case with the spermatic cord. The epididymis was normal in about half of the cases reported. Complications existed in a small minority, such as abdominal tumors, inguinal abscesses, syphilis, indurated glands, etc. Of twenty cases in which the results were reported, in thirteen death ensued from exhaustion, septicemia, cancer, etc. The disorder seems to occur mostly in early adult life, and is of rapid growth. He thinks that pain, though not always reported, is generally present in some stage. The diagnosis is sometimes difficult and mistakes are always possible. The course is progressive and the prognosis uncertain. The treatment is purely surgical.

21. **Puerperal Insanity.**—The two great elements in the causation of all cases of insanity are, without question, heredity and sepsis, and the latter element is especially prominent in the puerperal cases. Brush thinks too little attention has been given to this fact hitherto.

22. **Heart Disease from an Obstetric Point of View.**—The question as to whether heart disease should be an obstacle to marriage, especially its forms, and how pregnancy affects the system in such cases, are here treated by Wright, who sums up his views as follows: 1. Any woman having a heart lesion which is compensated should not be prevented from marrying. 2. Abortion should not be induced on a woman with heart disease unless very serious symptoms are present. 3. Premature labor should seldom or never be induced on account of heart disease. 4. Mitral stenosis is the most serious heart lesion during pregnancy and labor, aortic stenosis next, then probably aortic incompetency; mitral insufficiency is the least serious. 5. Treatment during pregnancy. Administer the following according to indications: strychnin, digitalis or strophanthus, catharties, nitrate of amyl, nitroglycerin, and regulate the diet. 6. Treatment during labor: Keep up the action of digitalis or strophanthus, especially during the first stage. Give strychnin and stimulants if required, and chloroform. As soon as the first stage is completed deliver with the forceps. 7. Watch the patient carefully during the third stage, the most dangerous time, and for some days after.

24.—See abstract in JOURNAL, July 8, ¶ 46, p. 94.

37. **Management of Normal Labor.**—The points here made by Shears are: the avoidance of too frequent and unnecessary examinations and routine rupture of the membranes, the needlessness of the Credé method of expression of the placenta in the majority of cases, needless dread of clots, the necessity of macroscopic cleanliness, and avoidance of complete reliance on chemical disinfectants, etc. He also thinks that the importance of perineal lacerations of the first degree is much exaggerated, and that primary perineorraphy has had too little attention given it as a factor in the production of infection. He thinks that the day of the use of douches is past, excepting in suspicious cases, and the tea and toast diet is going, as is also the ten days recumbency. The puerperium, while still defined as a period of unstable equilibrium, is still sufficiently stable to get along with less interference. He does not wish to say that these cases should be left not merely to Nature, but also to ignorance, but that normal cases should be watched more than meddled with by a competent scientific practitioner.

42. **Importance of Urea.**—The importance of urea and a knowledge of its quantitative elimination is dwelt on by Smith, who lays down the following general rules as regards the use of this determination in the prevention of eclampsia. He makes the statement that in about 5 per cent. of the cases of pregnancy, albumin may be found, "gradually increasing to 71 per cent. (?) during the last four weeks. It is of little pathologic importance, however, he says, unless we have a decreasing percentage of urea accompanying an increasing amount of albumin. If the percentage of urea is below .9 per cent., and the urine in twenty-four hours less than 20 ounces and contains albumin with casts, and evidences of toxemia are present, such as headache, nervousness and blind spots, the radical measure of emptying the uterus should be resorted to at once to save both mother and child. When the urea is above 1.4 per cent., the patient can be safely carried to full time, even with albumin and casts. The diet of cases with defective elimination is of the utmost importance. Milk is the ideal food where it can be taken. Preparations of fine flour, butcher's meat and tea and coffee should be restricted. He thinks that tonics, like arsenic, iron, etc., are useful, and when eclampsia is threatened, pilocarpin is a valuable adjunct, though not safe in routine practice. Calomel in 20-grain doses is beneficial both in its diuretic and cathartic action. Other measures—hot packs, etc.—are recommended, but we can not give them in detail.

44. **Tapeworm.**—The chief point in Patton's paper is the use of the old domestic remedy, pumpkin seed tea, for tapeworm. His formula is: Decorticate carefully by hand, two heaping quarts of dry, plump and mature seeds. The kernels, which should measure a trifle over one pint, to be made into a perfectly smooth and homogeneous emulsion with water only. As a test of perfection, not a single particle of kernels should be observable to unaided vision. It should be just like fresh cream. The emulsion, when ready for use should measure three pints, and be kept on ice from the time of its making until the last dose is taken. He gives the emulsion in 8-ounce doses every three or four hours, giving no food and having prepared the patient beforehand by a cathartic.

48.—See abstract in JOURNAL, September 2, p. 622. The same title appears below; see ¶ 65.

49.—See abstract in JOURNAL, September 9, p. 669.

50.—See JOURNAL, November 4, p. 1149.

51.—See abstract below, ¶ 75, p. 1217. For the same article see also title 99, below.

56.—See abstract in JOURNAL, October 7, ¶ 158, p. 907.

61.—See abstract in JOURNAL, September 2, p. 621.

63.—Ibid, p. 622.

64.—Ibid, p. 621.

65.—Ibid, p. 622; for same article see title 48, above.

66.—Ibid, p. 621.

67. **Basial Fractures.**—Elder reviews the general plan of treatment adopted, and calls attention to the important complications that may arise, hemorrhage being the first of these, and especially prone to occur if the fracture involves the posterior fossa of the skull, or it may result from the fracture involving some of the arteries entering the base of the skull. The treatment is always to be directed to the control of this. Sepsis is most enticingly invited in fractures that open into any of the cranial canals communicating with the air; such cavities are to be rendered aseptic, and packed with a pledget of antiseptic dressing. The external auditory canals should receive this treatment, whether or not blood is detected issuing from them. Cleanse the nose and nasopharynx, then the nostrils should be tamponed with aseptic cotton wool.

68. **Recurrent Paralysis of Third Cranial Nerve.**—This comparatively rare condition is reported as observed in a child of 14 years. The patient had for years been subject to attacks of hemicrania; more recently they had been accompanied by diplopia and ptosis of the left eyelid. The present attack was ushered in by severe (left) hemicrania, vomiting, double vision and ptosis affecting the left eyelid. Examination disclosed an undoubted paralysis of the left third nerve in all its branches, excepting that to the papillary sphincter, the eyeball was divergent in position. Vision of the right eye was practically negative, while the left showed 5/9; a dilated, sluggish pupil; accommodation *nil;* the fundi normal. Within the following three months the paralysis disappeared, but the accommodative and papillary symptoms remain unchanged.

69.—See abstract in JOURNAL, September 9, p. 668.

70.—Ibid, September 2, p. 622.

71. **Lesions of Intestines.**—A bullet entered the abdomen three inches to the right and on a level with the umbilicus, taking an anteroposterior course; four intestinal perforations were made, two wounds in the colon, one of inlet, the other of

outlet, and two like perforations in a loop of intestine that happened to be directly in the bullet's course. The wounds were closed by Lembert's suture, the intestinal loops cleansed with a weak bichlorid solution, the peritoneal cavity flushed with salt solution, and drainage established. Recovery was complete.

72. **Hypertrophy of Breasts.**—Bell's case presented both breasts very large, uniform, painless and moderately pendulous, the hypertrophy progressed to such an extent that ulceration of the integument had set in. The glands, when removed, weighed respectively 6½ and 5 pounds, and the skin was very much thinned. From an examination of the tissue it was concluded that "it was not pure hypertrophy of the gland tissue, though that must be present, but essentially . . . an orderly hyperplasia of the fibrous tissues." The abundant connective tissues between the alveoli was too perfectly formed to allow the condition to be considered simply fibromatous. The condition more nearly resembled what he terms a keloid overgrowth of the connective tissue.

74.—See abstract in JOURNAL, September 2, p. 621.

75. **Relationship Between Uterus and Thyroid Gland.**—Dickson's observations are based on some 200 cases, and from them he concludes that diseases of the thyroid are much more common among women than men—6.55 to 1. A direct sympathetic relationship, if nothing more, exists between the thyroid and the uterus and manifests itself in many ways. Thus, before the establishment of the function of menstruation the thyroid is often enlarged. This enlargement frequently is reduced on the establishment of the menses, and in those cases in which the gland is not reduced, it is observed that some thyroid engorgement is present before each menstrual period, diminishing as the flow is established. Goiter occurring after puberty is frequently associated with amenorrhea. When a woman with an enlarged thyroid becomes pregnant the gland increases in size with each pregnancy receding shortly after parturition. At other times pregnancy is directly responsible for goiter, it making its first appearance early after impregnation. The three periods in life during which the thyroid has been found most refractory to treatment are: before puberty, during pregnancy, and after the menopause. (The same article appears elsewhere; see title 51, above, and 99 below.)

87. **Abdominal Surgery.**—Bernays shows that with the absence of bacteria surgery is comparatively simple and safe, and cites cases to show this. As regards operative cleanliness, too much is as bad as too little that is to say, brushing and scrubbing brings bacteria to the surface that might otherwise be harmless in the deeper layers of the skin. The best method of cleaning the hands is thorough use of alkaline soap for eight or ten minutes. The next important thing is to have had experience, and the only way to master the principles of surgery is to have seen them in practice. Book knowledge alone can never meet the requirements. The diagnosis in abdominal surgery is always uncertain and may only be obtained sometimes by the operation. He remarks that abdominal surgery is the easiest of all kinds of surgery, and that is the reason why there are so many abdominal surgeons at the present time who will not perform even the simplest operations in other parts of the body. The details of operative methods are given and the possibility in apparently hopeless cases, what he calls opiated cases, of appendicitis are discussed. He thinks that if opium were taken away from the general practitioner and epsom salts substituted, 80 per cent. of these hopeless cases would not occur. He recommends that each town and village support an operating-room and a few sick-rooms for emergency cases, and he has tried to show that the great complications and refinements of modern surgery, while not always attainable are also not always necessary.

98. **Hernia Following Abdominal Operations.**—Smith considers hernia a frequent complication of abdominal section, but a preventable one. It can be avoided by leaving the stitches for one month if the patient is thin enough to permit through-and-through sutures, or by using non-absorbable buried ligatures where two layers of sutures are required. He prepares his silkworm gut by putting it into sealed glass tubes and boiling it. A cut with a file is made, and when it is required for use the tube is snapped across. It can also be hindered by discarding the abdominal drainage-tube, and when drainage is necessary, which is rarely the case, draining by the vagina; also by securing accurate coaptation of the cut edges by marking the places where the stitches are to go before the incision is made, and by taking care that no peritoneum is curved up so as to come between the fascia and muscle. It is easily cured in small cases by a single silkworm gut purse-string suture, and in the larger cases by splitting the edges of the ring until the recti muscles are exposed from top to bottom and suturing them with buried silkworm gut. Patients with buried silkworm gut stitches do not need to stay in bed for more than two weeks, and in some cases less, and do not need an abdominal belt. Those with through-and-through silkworm gut stitches left in for a month can in cases of necessity go home in twelve to fifteen days, and return at the end of four weeks to have their stitches removed. They do not need to wear a support until the stitches are removed, and even then it is much less necessary than in those cases where they have been removed earlier.

99.—This paper appears elsewhere also: see above, titles 50 and 75.

100.—See abstract in JOURNAL, September 9, p. 670.

112. **Traumatic Rupture of Bile-Duct.**—Garrett reports a case of traumatic rupture of bile-ducts in a young man aged 21, in which eleven days after the injury tapping was done and a large amount of bile let out, and this was repeated again four days later and five days later a laparotomy was performed showing a rent in the common duct between the layers of the lesser omentum. A funnel-shaped tract down to the part was walled off and a large drainage-tube inserted. After the operation the discharge was profuse, but gradually diminished and perfect recovery followed. The author discusses the literature of the subject, believing his case of sufficient rarity to be of interest.

113. **Electricity for Catarrhal Affections.**—Nasopharyngeal catarrh has been treated for some time by Brokaw with electricity, more especially the sinusoidal application, preceded, to get the best effect, by the galvanic current. He has had excellent results in this condition, with currents that were not unpleasant, regulated by the milliamperemeter, and also in cases even of decided stenosis and of adenoids. He has not had to use the septum punch and forceps and the nasal saw for the last two years. One point needing emphasis is the avoidance of intranasal irritation by too strong currents. Hypertrophic and atrophic rhinitis are alike amenable to this treatment. He will admit failures in some cases, but believes that on the whole the treatment is a very marked advance.

114. See abstract in JOURNAL, November 4, p. 1169.

115. Ibid, September 23, p. 795.

117. Ibid, p. 796.

122. **Inflation of Middle Ear.**—Lofton here describes the method of auto-inflation of the middle ear devised by him. The instrument consists of one of the newer forms of stethoscopes with the chest receiver detached and a hard rubber, flattened mouthpiece substituted. The latter is held firmly between the patient's lips, while the ear apparatus is adjusted to his ears. All that is required to inflate the cavity is simple suction on the part of the patient, rapidly executed. The force thus generated causes the adherent drum to vibrate or to swing to and fro. If only one ear is desired to be inflated, pressure on the opposite tube will confine the action to it.

123.—This paper appeared elsewhere: see JOURNAL, November 4, title 1071, p. 1155; abstract, October 21, ¶ 153, p. 1036.

124. **Pneumonia in Infants.**—The best signs of obscure beginning pneumonia in infants under 2 years are, according to Northrup: 1. Disturbance of pulse—respiration and ratio, so that it departs from the normal of 4 to 1 and approximates 3 to 1. 2. Fever, continuous, intermittent or remittent. 3. Râles, fine. His treatment is: 1, fresh air; 2, avoiding indigestion and flatulence; 3, baths or packs. Poultices, for pain only, should be used intermittingly, heart stimulants,—strychnin, nitroglycerin, alcohol, digitalis—when needed. Antipyretics—coal-tar products—are mentioned only to condemn them absolutely.

130. **Mountain Fever.**—The mountain fever of the Rocky mountain region is here shown by Stuver to closely correspond in all respects and be identical with typhoid fever, the variations being comparatively unimportant. He believes in an antiseptic and eliminative treatment. During the first

two or three days he gives .5 gr. each of calomel and sodium bicarbonate hourly until free catharsis is induced. He keeps up the action of the bowels by further eliminative treatment in the succeeding days. The cold bath is recommended, but the difficulties of giving it in private practice are often insuperable, and he recommends, as a satisfactory substitute and free from its inconveniences and dangers, the intrarectal injection of cold normal salt solution, which is, he thinks, original with himself. He has found this of great benefit in many severe cases. As a heart tonic he relies principally on strychnin. The diet is restricted to milk, buttermilk and other liquid nourishment.

131 **Yellow Fever.**—Fondé's paper calls attention to the success in recent years in dealing with yellow fever, and the comparative mildness of the epidemics when they have occurred, which he attributes to the sanitary measures. He believes that thorough disinfection, isolation and quarantine not only can check an epidemic but can stamp it out, as illustrated by the Hampton, Va., epidemic.

132. **Congenital Tumors of the Fingers.**—Two cases of superficial dermoids occurring at birth are reported by Fairman, and the general subject of digital tumors is discussed.

134. **Colloid Degeneration of Ovary.**—Jones describes what she calls the fourth hitherto undescribed disease of the ovary, which appears in the form of colloid bodies scattered through the tissue, especially destroying the ova. Her article is illustrated with a number of cuts showing the condition and its effects. She maintains that in these cases the whole ovary should be extirpated, in fact, she objects to ever leaving any portion of the ovary in any case of operation. She says: "I have never yet seen an ovary of which I believed that part could be left with advantage to the patient. I rather believe that where part can be left none should be taken."

135. **Congenital Hernia of Umbilical Cord.**—Coley reports two cases of this condition in which the patient survived after operation.

136. **Headaches from Eye-Strain.**—Headaches from eye-strain are, according to the author, much more frequent than is generally supposed. The conditions bringing them about are, he believes, an undue stimulation of the nerve-centers of nerves supplying the intrinsic and extrinsic muscles of the eye, causing a reflex vasomotor action referred to the meninges and producing congestion. He thinks that the confusion of the image may be a contributing cause, but not the most important one.

140. **Abdominal Surgery.**—In concluding his article on the symptoms requiring immediate interference by abdominal surgery, in which he reviews a large number of conditions, Richardson says that these should not, as a rule, be interfered with surgically by inexperienced practitioners. No matter how simple the case may appear to be, possible complications can not be foreseen, and to meet these may require the very highest skill. It is the duty of him who observes symptoms suggesting acute and serious abdominal lesions to lose no time but to determine the probable nature of the lesions, suggest the proper remedy, and if the experience in operating is lacking, call to his aid the nearest one who has the experience.

141. **Carcinoma Under Age of Thirty.**—This paper gives a discussion of the literature of early carcinoma, and reports three cases occurring in patients of 28 years and under.

147. **Amalgam Fillings and Mercurial Poisoning.**—The communication of Grady was incited by a recent article read before a New York medical society on "Mercurial Neurosis Resulting from Amalgam Fillings," and the author finds, from his examination of the subject and the experience of other dentists, both clinical and experimental, that the indictment against amalgam fillings is not supported. He does not, therefore, believe that mercurial poisoning or other toxic effects are likely to occur from mercury in the amalgam.

149. **Preservation of Casts.**—Boston gives the following formula for the preservation on slides of urine casts for microscopic examination: Liquor acidi arseniosi (U. S. P.), 1 fl. ʒ; salicylic acid, .5 gr.; glycerin, 2 fl. ʒ. Warm slightly until solution is effected, when add acacia (whole tears), and again warm until solution is saturated; after subsidence, decant clear supernatant liquid. A drop of formalin (40 per cent.) may be added to this mixture if desired. After the ordinary precautions of cleanliness in securing the urine, a bottle, previously cleaned, is partially filled, corked tightly and allowed to stand in a cool place until a precipitate collects. Decant off the urine, add an equal quantity of distilled water and allow it to stand until it collects again at the bottom. (If a few drops of chloroform are added the urine can be kept for days without any change in the casts.) The precipitate is lifted by means of a pipette and a small drop of the thickest of the sediment placed on the center of a slide and examined under a low power. If casts are present, evaporate nearly to dryness and add a drop of the above described formula by means of a glass rod to the center of the drop of urine, and as they do not mix carry a fine needle from the outer margin to the center until the two substances show no tendency to separate, avoiding also the formation of air bubbles. A cover-glass is then moistened by the breath and allowed to fall gently on the specimen, the slightest pressure being avoided, also heat. The slide is now put in a cool place for a few hours for hardening. The specimens thus prepared have shown every feature of the casts after a period of two years.

150. **Medical History of Sir Walter Scott.**—Bartholow discusses the physical pathologic peculiarities of Sir Walter Scott, concluding that he must have had acute infantile poliomyelitis, biliary calculi in middle life and rheumatism and atheromatous disease of the arteries with capillary hemorrhage or thrombus, producing apoplectic seizures in his later days. The autopsy, as is well known, showed softening of the corpus striatum as probably the cause of his death. The convivial habits, excessive mental labor and worry were the contributing factors that carried him off before his time.

151. See abstract in JOURNAL, August 12, ¶ 39, p. 405.

152. **Home Modification of Cow's Milk.**—The object of Chapin's paper, as stated, is to present a method of modifying cow's milk for infant food that will be scientific enough for the average case and easy to apply in all cases. He thinks that the principal dairies in large cities furnish a fairly uniform quality of cow's milk as regards its percentage of fat and proteids. The delivery of milk in bottles separates the cream so that several inches of the upper part in the neck of the bottle is pure cream, and he recommends a dipper which he illustrates, holding just one ounce, for the purpose of removing this. While it is not easy to test the proteids in milk, we are taught that they nearly equal the fat in the milk up to 4.5 per cent. fat. Avoiding small fractions, cream with 12 per cent. fat would have three times as much fat as proteids, that is, 12 to 4; 10 per cent. cream would have 2½ times as much fat as proteids; 8 per cent. would have twice as much and so on. Almost any desired percentage can thus be obtained by diluting these creams, and this "deep-setting" method of separating the cream, above mentioned, in the delivery in bottles, facilitates it. About 10 per cent. of the total fat is left in the skimmed milk, so we only get about nine-tenths of the theoretic quantity in the creamy layer. When it is desired to have fat three times the proteids, make a 12 per cent. fat cream by taking the first nine dippers of cream and milk from a quart bottle from which the cream has arisen, and mix. The result is 9 ounces of cream, about 12 per cent. fat, 4 per cent. proteids and 5 per cent. sugar. For any quantity of food containing fat three times the proteids use this formula with 12 per cent cream.

Dilution of twelve-per cent. cream = twelve per cent. divided by desired percentage of fat.

Fluid ounces twelve-per-cent. cream = desired fluid ounces food divided by dilution.

Sugar = desired fluid ounces food divided by twenty.

Diluent = desired fluid ounces food minus fluid ounces twelve-per-cent. cream.

Example.—Desired twenty-four fluid ounces food containing fat, three per cent.; proteids, one per cent.; sugar six per cent.

Twelve per cent. ÷ three per cent. = four dilutions.

Twenty-four ÷ four = six fluid ounces twelve-per-cent. cream.

Twenty-four ÷ twenty = one ounce and a fifth sugar.

Twenty-four — six = eighteen fluid ounces diluent.

When it is desired to have fat twice the proteids, take the first sixteen dippers full of milk and cream out of a quart

bottle and mix, the result is 16 fluid ounces of cream, about 8 per cent. fat, 4 per cent. proteids and 5 per cent. sugar. Any amount of this, as in the former case, can be diluted according to the same general principles. He thinks that this method is sufficiently accurate in attaining average percentages applicable to the modification of cow's milk. What is needed in any given case is the dilution that will agree with the baby we are trying to feed. The physician can vary the strength of the milk by directing the number of ounces to be dipped out of the bottle of milk, and thus tentatively reach the strength that is suitable for the infant's digestion. Having obtained the desired percentage the next step is to get the cow's milk as nearly as possible in the same physical condition as human milk. The casein being greater in cow's milk, the best method of acting on it in the way of attenuating and modifying the clot is by properly diluting the milk with a decoction of cereals. The gruel may be dextrinized to more fully expose the proteids to the action of the gastric juice, by diastase. The decoction he himself prepares is made as follows: a tablespoonful of malted barley grains crushed, is put in a cup and enough cold water added to cover it, usually two tablespoonfuls. This is prepared in the evening and placed in the refrigerator over night. In the morning the water, looking like thin tea, is removed by a spoon or skimmed off, and is ready for use. About a tablespoonful can be thus obtained and is very active in diastase and sufficient to dextrinize a pint of gruel in ten or fifteen minutes.

155.—See abstract in JOURNAL, November 4, p. 1165.

FOREIGN.

British Medical Journal, October 21.

Rational Treatment of Syphilis. A. H. WARD.—The rational treatment of syphilis, according to Ward, is as follows: Mercury should be used alone in the primary and secondary stages in the absence of severe lesions, and treatment should be begun at the earliest possible moment. The drug should be given in a form easy to take and not irritating to the stomach, and should be pushed to the toleration point, as indicated by slight affection of the healthy gums. When this is reached it should be kept up at that point, but never increased or diminished. The course should continue for two years, that being the period of natural cure or real latency. Iodids should not be used in routine treatment in the primary and secondary stages, as by removing the toxins the phagocytes will be no longer attracted to the germ and encapsulation and destruction will be hindered. Iodids together with mercury should be used in increasing doses in the gummata stage, and a mild mercurial course is advisable later. In intractable cases with chronic blood poisoning and severe lesions, a large quantity of water taken daily aids the excretion of the toxins, and in the shape of Zittmann's decoction is undoubtedly very effective. The main point in the treatment of syphilis, according to Ward, is to push the mercury to the toleration point and keep it there throughout the course.

Method of Attaching the Mucous Membrane to the Skin After Perineal Excision of Rectum. LEONARD A. BIDWELL.—The method is as follows: After incision of the rectum by the ordinary racket-shaped incision around the anus, two transverse incisions, about two inches long, are made on each side of the original incision, about one inch apart; the flaps so formed are dissected up and attached by silkworm gut sutures to the cut edge of the rectum; in most cases this can be done without any tension, but should there be any, a longitudinal incision in the posterior surface of the rectum will enable the union to be effected. Finally the posterior part of the wound is lightly plugged. He claims that with this method, even if all the stitches do not hold, the amount of cicatricial contraction will be infinitely less, and the period of convalescence shorter than if the wound had simply healed by granulation in the ordinary way.

Enterorraphy Without Mechanical Aids. JAMES H. NICOLL.—The method of circular enterorraphy favored by Nicoll is that with Czerny-Lembert sutures, and he does not use the button in ordinary cases. In certain instances, however, where there is much congestive thickening of the intestinal coats and large fecal accumulations above the lesion, he prefers a method which in principle has been devised independently by Robinson, Harris of Chicago, and Skelly, as well as himself, and it consists in removing a ring of mucous membrane from the distal end into which the proximal is passed—with or without removal by roughening of its peritoneal coat—and there secured by suture either looped or continuous, the whole procedure being carried out without any mechanical support.

Lancet, October 21.

Acoin as Local Anesthetic in Subconjunctival Injections. ROBERT BRUDENELL CARTER.—Carter gives his experience with acoin, which he finds is a very valuable anesthetic and promises to facilitate the treatment of some of the more intractable inflammatory injections of the eye, and that it has the power to render the subconjunctival injection of cyanuret of mercury injected for the relief of corneal opacities, etc., painless. He thinks that it takes away the serious objections to the use of this method, which in properly selected cases appears to be of incontestable value.

Diphtheria Treated with Antidiphtheritic Serum. A. J. TONKIN.—From an analysis of 200 consecutive cases of diphtheria treated with antitoxin, the author thinks that the treatment reduces the general mortality rate, improves the prospects in laryngeal cases, lessens mortality of tracheotomy and does away with its necessity if early practiced; is the same for all ages and sexes, diminishes the chances of nephritis and albuminuria, lessens the chances of paralysis when used the first or second day; and reduces its mortality, and prevents the extension of the disease to the larynx from the fauces. The only disadvantages noted have been slight discomfort from urticarial rashes and pains in the joints in a small proportion of cases.

Influence of Fatigue on Structure of Nerve-Cells. GUIDO GUERRINI.—In order to study the physiologic effects of fatigue on the nerve-cells, which hitherto had only been done by Hodge, Guerrini exercised dogs in a special apparatus, and then killing them, sought for the alterations due to excessive work. The distance covered by the animals before producing signs of fatigue was measured and the alterations found in the nerve-cells were as follows: 1, an increase of the pericellular lymphatic space; 2, the presence of leucocytes on the cell in the pericellular lymphatic space; 3, disorder of the rete achromaticum; 4, decomposition of the pigment masses which were sometimes reduced to an accumulation of small fragments; 5, the presence of vacuoles in the protoplasmic mass; 6, irregularity of the margins of the nucleus, and 7, the presence of vacuoles in the nucleus. These modifications, although they may sometimes show themselves in the normal nerve-cells, were in the above mentioned fatigued cells undoubtedly a consequence of excessive work. In fact, the more the dog had been fatigued, the more profoundly altered the nerve-cells of its cerebral or cerebellar cortex were found to be. Moreover, all the above mentioned alterations do not appear simultaneously in the nerve-cells. The two modifications which are the first to show themselves have always been: 1, increase of the pericellular lymphatic space; and 2, decomposition of the pigment masses. The process of destruction was not always of constant type, because it sometimes began at the circumference, sometimes at the center of the protoplasmic mass, and sometimes immediately on the nucleus. The first case, however, was always the most frequent.

Summer Diarrhea: Its Probable Cause. H. POOLE BERRY.—The cause of summer diarrhea is attributed by Berry to a specific infection of the surface subsoil by some specific microorganism.

Craving for Stimulants. HARRY CAMPBELL.—The proposition in Campbell's paper is that the blood normally contains stimulants, and that these exercise a favoring influence on function, and conduce to, and are possibly essential for, the general feeling of well-being. This explains, in his opinion, the widespread liking in man and beast for stimulants, which is therefore physiologic.

Archives de Neurologie, September.

Dual Center of Cortical Oculomotor Innervation. J. ROUX.—Normal anatomy, experimental and clinical and anatomic pathologic observation agree in demonstrating that the eye has two zones of cortical projection, both motor and sensory. One, the anterior oculomotor center, corresponding to the area of the fifth nerve, is probably located at the base

of the second frontal. The other corresponds to the zone of sensory projection at the inner inferior surface of the occipital lobe. Each of the centers acts bilaterally and has under its control the entire oculomotor apparatus. An isolated lesion of the anterior center may entail conjugate deviation of the eyes and slight interference with the movements of the lids. An isolated lesion of the posterior center may produce conjugate deviation of the eyes and hemianopsia. Ptosis of cortical origin is perhaps due to a simultaneous lesion of the two oculomotor centers of the same side. A bilateral and symmetric lesion affecting the two anterior oculomotor centers or their disturbing fibers, produces a special clinical picture characterized by the abolition of the voluntary movements of the eyes and lids, with retention of the co-ordinated reflex movements which are under the control of the intact posterior oculomotor centers. Four observations are described.

Progres Medicale (Paris), October 14.

Symptomatic Idiocy From Tuberous or Hypertrophic Sclerosis. BOURNEVILLE.—The observation reported forms the seventh in the writer's experience; a child normal to six months, little heredity, with a record of convulsions after this date and complete idiocy; at 17 months fits of screaming, grinding the tenth, intermittent pallor of the face, sleep interrupted by screaming; no signs of intelligence, no attention. Treatment resulted in improvement of character and attention, but teeth-grinding, etc., continued, with death between the third and fourth year of age, from bronchitis. Numerous nuclei of tuberous sclerosis were found on the two surfaces of the cerebral hemispheres, and a row of sclerous nodules extended the whole length of the corpora striata. This hypertrophic or tuberous sclerosis was evidently connected with the convulsions at 6 months, and resulted in idiocy. The concomitant meningo-encephalitis noted was probably the cause of the screaming, teeth-grinding, pallor, etc. It renders more difficult the clinical description of this form of idiocy. In the 10 cases on record of symptomatic idiocy from tuberous sclerosis, it was complicated by epilepsy in 9, with seizures and vertigoes in 7 of these; seizures alone in 1, and in the other vertigoes alone. The tuberous sclerosis was accompanied by meningo-encephalitis in 5 out of the 10.

Hypertrophy of Spleen in Course of Hepatitis. F. RAMOND.—Chauffard's hypothesis that the spleen is the first organ involved in certain hepatites, and that the infection only spreads secondarily to the liver, was confirmed by a recent observation of a typical case of benign infection by the staphylococcus aureus. The spleen first increased in size, extending two or three finger widths beyond the false ribs. At the end of the week the liver also increased rapidly in size until it extended four finger widths above the costal arch. As the infection subsided, the spleen first and then the liver returned to normal size, proving to a demonstration the capital rôle played by the spleen in the hepatomegalia. Charrin, on the other hand, asserts that the spleen becomes hypertrophied secondarily, to supplement the liver in its antitoxic functions. This theory is supported by the fact that this supplementary action between the spleen and the liver is not restricted to the antitoxic function, but occurs also with a host of other organic phenomena, such as destroying the old red corpuscles when they can no longer serve for the nutritional exchanges. The presence of a large amount of iron in the liver parenchyma, the formation of bilirubin at the expense of the hemoglobin, prove this as far as the liver is concerned, while the accumulation of iron in the interstices of the spleen, the formation of ochre pigment, the destruction of the reds by Kölliker's big cells, and the smaller number of reds in the splenic vein combined with the splenic artery, demonstrate the hematolytic rôle of the spleen. The liver and the spleen also destroy the bacteria in the circulation. These and other less clearly defined functions seem to be first outlined and started in the spleen and completed in the liver in normal conditions. But in the pathologic conditions of the hepatitis, the physiologic activity of the liver diminishes and that of the spleen increases.

Revue de Chirurgie (Paris), October 10.

Treatment of Fractures of the Patella by Suture of the Capsule Without Touching the Bone Fragments. M. VALLAS.—This writer describes eight observations which convincingly confirm the value of this method of treatment. Fractures of the patella alone are treated by compression, massage and rapid mobilization, like hemarthrosis of the knee, but when the fibrous tissues around the patella are torn, surgical intervention is necessary. The best procedure is a large arthrotomy, cleansing the joint and suturing the lateral lacerations of the capsule. Suture of the bones is unnecessary. Every fracture leaving a space of at least 2 cm. should be operated on as this can not occur without laceration. But sometimes even with a very small space the rupture has extended into the fibrous tissues; these are the cases which reserve disagreeable surprises for the abstentionists. Vallas usually waits three or four days while treating the knee, as for a hemarthrosis. When the inflammation has subsided it may be possible to palpate a laceration. If the fracture is simple the patient can raise the heel from the plane of the bed by the fourth day, in which case he refrains from further intervention, but if impotence still persists, he performs arthrotomy at once.

Traumatic Paralysis. F. MALLY.—The character of the paralysis depends on whether the traumatism was slow and continuous or abrupt and momentary. The histologic lesions are represented by three principal groups: 1, lesions of irritation, constituted by an indistinctly defined condition of the nerve and muscles, recalling the lesions of degenerative atrophy, but transient to lesions of degeneration, represented by the return of the anatomic elements to the embryonal condition: the degenerative atrophy that accompanies paralysis from section of a nerve, serious compression, etc., and 3, the numerical atrophy described by Kippel, which consists in the diminution in the number, but not in the size, of the anatomic elements: this includes serious reflex paralysis, traumatic myelopathy, etc. Mally distinguishes an important group of reflex paralyses among the post-traumatic paralyses of the superior member; a radicular paralysis developing like a myelitis. He has established by the results of traction of the nerve roots and by clinical experience that certain traumatisms may injure the spinal cord directly and induce a paralysis of a myelopathic character. This new group he proposes to call traumatic myelopathy.

Archiv f. Klinische Chirurgie (Berlin), lx, 1.

Bactericidal Action of Bier's "Stagnation Hyperemia." W. NOETZEL.—The primary effective influence of this therapeutic measure, and hence the explanation of its curative power, is its remarkable bactericidal action which impresses on the entire process the character of an acute aseptic inflammation. "This artificial concentration of the natural means of defense possessed by the organism is a more logical and scientific method of therapeutics than the introduction of more or less toxic foreign substances." It has proved very successful in the writer's numerous experiences.

Berliner Klinische Wochenschrift, October 9 and 15.

Face Veil a Cause of Erythema. O. ROSENBACH.—A veil drawn tight compresses the nose and a portion of each cheek, disturbing the circulation and leading, possibly, to permanent dilation of the vessels and consequent disfiguring redness, the area of which resembles a butterfly in shape, betraying its mechanical origin. The confined steam from the breath also adds to the effect, and entering a warm room directly from the cold outside exaggerates all the evils of the tight veil.

Biologic Test for Arsenic in Hair, Dandruff, Sweat, Urine, Etc. W. SCHOLTZ.—The JOURNAL has mentioned the successful test for arsenic in hides, etc., obtained by sowing the fungus penicillium brevicaule on the suspected substances. It converts the fixed combinations of arsenic into volatile gases with an intense odor of garlic, and thus renders possible the detection of extremely minute amounts of arsenic. Scholtz has found it equally effective in detecting arsenic in tissues from persons who had been taking arsenic for some time. A tenth of a gram of hairs or scales of epidermis would present the specific garlic odor in forty-eight hours, while the control tests were invariably negative. The substance to be tested was mixed with a little nutrient medium and the penicillium inoculated on the slanting stiffened surface. Other fungi possess the same property but in a lesser degree.

Salt Cured Meat and Fish. A. PETTERSSON.—According to the results of research here reported, preparations of meat and fish with less than 15 per cent. salt always contains a constant

and luxuriant vegetation of micro-organisms, with products of micro organic life, and they owe their specific taste, color, consistency and smell chiefly to the presence of this microbian flora.

Deutsche Medicinische Wochenschrift (Berlin), October 19.

Relations of Leucocytes to Bacteria-Dissolving Substances. MOXTER.—The important research described in this communication from Koch's Institute for Infectious Diseases, was conducted by a method which allowed microscopic control of the bactericidal process as it occurs in animal juices. Comparison of the bactericidal power of effusions with and without leucocytes with that of the serum, failed to establish any facts which indicate that the leucocytes have any influence on the amount of the bactericidal substances. Although slight traces could be detected clinging to the bodies of the leucocytes, yet this could not be accepted as proof that the leucocytes are the producers of these substances, as the latter were found in much larger quantities in animal fluids free from leucocytes than in those containing them. Much more accurate information can be derived with the microscope in studying these bactericidal processes in animal fluids than by counting plate cultures. The influence of agglutination interferes with the correct appreciation of the latter. No facts were discovered which indicate any production of alexins by the leucocytes, and no regular connection between the number of leucocytes and the degree of the bacteria-dissolving process could be established.

Centralblatt f. Chirurgie (Leipsic), October 14 and 21.

New Method of Removable Buried Suture. D. STAPLER.—The needle is inserted through the tissues a short distance back from the right edge of the wound, and brought up through the deep layers of the opposite edge and then back, passing over the deep layers of the first side and then up, emerging a short distance below where it first went in. The thread is then cut, leaving the two ends hanging. The second stitch is taken in the same way, commencing on the other side and leaving the ends hanging on this left side. Each alternate stitch is thus taken from opposite sides and is tied over a roll of gauze. Stapler always leaves a space a millimeter wide in suturing the deep layers to prevent necrosis from the threads pulling as the intestines become distended with gas. The stitches are removed by cutting the thread close to the skin and pulling on the other end, when it comes out without the least difficulty.

Cocainization of Spinal Cord. J. B. SELDOWITSCH.—Bier recently published his experience with anesthesia successfully induced by injecting cocain directly into the spinal canal, as mentioned in the JOURNAL at the time. Seldowitsch confirms the efficacy of the procedure both by experimental and four clinical tests, the latter consisting in the amputation of a leg or resection of the knee, absolutely painless after injection of a 1 or .5 per cent. solution into the spinal canal, the amount of cocain varying from .006 to .01. Anesthesia was complete in five to nine minutes—patients conversing during the operation—but in every case a chill was noted two or three hours afterward and the temperature rose to 39 C., 40 C. in one case, subsiding again to normal in a few hours. There was also headache and slight nausea, but all these symptoms vanished within twenty-four hours. One of the subjects succumbed to cachexia five weeks after removal of the leg for sarcoma, and nothing abnormal could be detected in the spinal canal nor in the cord. Further research may suggest a means to obviate these unpleasant after-effects of this otherwise brilliantly successful method of anesthesia.

New Process of Resection of Elbow-Joint. T. CAVAZZANI.—The aim of the ideal operation is to spare the bones and soft parts as much as possible, and yet have sufficient room for examination and resection of all the recesses of the joint as may be needed. The method here proposed fulfills these conditions most admirably, according to the author. The entire joint is exposed to view, and yet none of the vessels or nerves are injured and the radial nerve is left entirely intact. The triceps tendon is only half separated, the epitrochlear muscles are spared, the ulnar nerve is not even pushed aside, and the lig. lat. int. and the inner half of the capsule not divided in most cases. The soft parts heal in eight to ten days, and passive movements can then be begun. The incision through the skin and subcutaneous connective tissue commences outside of the tendon of the biceps, 2 cm. below the external condyle, and is carried obliquely from behind upward, terminating at the inner edge of the ulna near the tip of the olecranon. The arm is stretched during the first half of the incision and half flexed during the second half to stretch the skin. The upper flap is loosened to expose the notch between the anconeus and the muscles attached to the outer condyle. The latter is then exposed. The aponeurosis is then divided lengthwise from the collum radii over the outer condyle, pushing the muscles attached to the condyle inward, while their origin on the humerus is detached under the periosteum. The capsule is thus opened up to the proc. coronoideus ulnæ. On the other side the attachment of the anconeus is detached or cut across, thus entirely freeing the external condyle from all muscular connection with the forearm. The capsule is thus also exposed back to the olecranon. The tendon of the triceps is next partially divided, in connection with the periosteum of the ulna, but only its outer portion, exposing the radial half of the olecranon and its tip, although only half the tendon is severed. The joint is then opened. The external lateral ligament and the capsule are divided in the line of the joint, forward as far as the coronoid process and backward to the tip of the olecranon. The forearm is then dislocated from the upper arm by flexing it in exaggerated adduction until the inside edge of the hand touches the axilla. The operation completed, the forearm is restored to its opposite position, the external lateral, the anconeus and the skin are sutured, and the articulation is restored to its previous condition without any great injury.

Fortschritte der Medicin, October 11.

Test Tube for Ehrlich's Diazo-Reaction. B. RANKE.—The tube terminates below in a smaller tube, about one-fifth of the diameter of the upper one. This lower extension, which holds .2 c.c., is filled with the solution of natr. nitr. and the sulfanilic acid poured in above this to a mark representing 10 c.c., and the urine to another mark representing 10 c.c. additional. The tube is then shaken and as the contents froth the liquid sinks a little below the last mark. Ammonia is then added to bring it up again to this mark, when with further shaking the test is complete with no waste of material, and the proportions mathematically exact.

Muenchener Medicinische Wochenschrift, October 17.

Diazo-Reaction in Urine and Bacteria in Blood of Phthisical Subjects. SCHROEDER AND NAGELSBACH.—This comprehensive study is based on numerous analyses by himself and others—tests which have established that Ehrlich's diazo-reaction in the urine of phthisical subjects is a sign of evil prognosis. It completes in a few cases, but can not take the place of clinical prognosis in phthisis. It has a certain value in foretelling a fatal termination, but is otherwise far from indispensable. The coincidence of the diazo-reaction in the urine and of bacteria in the blood was never established. The passage of bacteria, especially the pyogenic, into the blood of phthisical subjects, should only be regarded as a phenomenon accompanying the death struggle. It has therefore no significance in the interpretation of hectic fever. The research reported in this communication throws no light on the question of mixed infection in phthisis.

Virchow's Archiv (Berlin), October 5.

Multiple Gliomata of Spinal Cord. M. FREUDWEILER.—A large number of small tumors were scattered throughout the spinal cord, chiefly in the gray, but also in the white substance, in different stages of development, each developing independently on a homogeneous tissue. The subject was a man who had succumbed to acute traumatic tetanus. The writer remarks that this observation is unique.

St. Petersburger Medicinische Wochenschrift, October 5.

Sexual Hygiene. E. HOERSCHELMANN.—The Public Morality League in Norway formally requested the advice of the Christiania Medical Faculty in regard to the question whether sexual continence was injurious to the health in any way. The reply was: "We know of no affection nor any weakness of which it can be said that it owes its origin to a perfectly chaste and moral life." Hoerschelmann quotes numerous authorities in support of this view, and also Bjornson's assertion that "our physicians are not yet our ethical advisers to the extent that they should be," and urges: "let us no longer allow this reproof to rest on our profession, and let us reflect that the consequences of advice from us to the contrary are of much more extensive and far-reaching import than is evident

at the first glance." The assumption that sexual abstinence is injurious to the health of a physically and psychically normal young man or woman has never been demonstrated and has no foundation in medical experience. Sexual continence does not favor the development of onanism and masturbation in otherwise normal conditions. He agrees with Hegar that the dangers of promiscuous intercourse are now so well established that only the weak-minded or extremely frivolous would resort to it if it were not for the assumed approval of the physician, and that the latter should absolutely reject this responsibility.

Societies.

COMING MEETINGS.

Tri-State Medical Association of Mississippi, Arkansas and Tennessee, Memphis, November 14-16.
Oklahoma Territory Medical Society, Guthrie, November 16.
Southern Surgical and Gynecological Association, New Orleans, La., December 5-7.
Western Surgical and Gynecological Association, Des Moines, Iowa, December 27-28.
Indian Territory Medical Association, Wagoner, December.

Central Illinois Medical Society.—The twenty-fifth annual meeting of this Society, the largest meeting since organization, was held in Pana, Ill., October 31. The next will be held in the same city, April 10, 1900.

Washington (D. C.) Obstetrical and Gynecological Society.—At the 305th meeting of the Society, held November 3, Dr. Kelly read a paper on malignant disease of the kidney in children reporting a case and presenting a specimen. Dr. Acker followed with a discussion of the matter.

Davies County Medical Association.—In Owensboro, Ky., recently, this Association was organized and officers elected as follows: president, J. W. Ellis, Masonville; first vice-president, C. J. Lockhart, Ensor; secretary, J. J. Rodman, Owensboro; treasurer, J. L. Early, Knottsville. There will be four regular meetings annually, the first Tuesday in January, April, June and October.

Union District Medical Society.—This Society elected the following as officers, at the recent meeting held in Connersville, Ind.: president, G. Pigman, Liberty, Ind.; vice-president, O. Meyer, Rushville, Ind.; secretary, J. E. Torrence, Oxford, Ohio. The Society comprises members from two Ohio and three Indiana counties, and will hold the next session in Liberty, Ind., in April, 1900.

Bucks County Medical Society.—At the last meeting of this Society, held in Doylestown, Pa., November 1, the following officers were elected: president, Abraham S. Wilson, Bristol; vice-presidents, Noah S. Nonamaker, Bedminster, and John A. Fell, Doylestown; secretary, A. F. Myers, Blooming Glen; treasurer, Frank Swartlander, Doylestown. The next meeting will be held in Quakertown, in February, 1900.

Tri-State Medical Society.—The newly elected officers for this Society, which met in Chattanooga, Tenn., recently (see JOURNAL, November 4, p. 1164), are: president, R. R. Kime, Atlanta, Ga.; vice-presidents, F. W. McRea, Atlanta, E. T. Camp, Gadsden, Ala.; F. B. Sloan, Cowan, Tenn.; secretary, Frank Trester Smith, Chattanooga; treasurer, George R. West, Chattanooga. The Society meets next year in the same city.

Brainerd District Medical Society.—The twenty-second annual autumnal meeting of this Society was held in Lincoln, Ill., October 26. Delegates were present from Logan, Mason, Tazewell, Menard, Sangamon and Morgan counties. Dr. Carl E. Black, Jacksonville, made two addresses, one on "Microscopy," another on "Necrosis of the Tibia." Others were: "Stone in the Urinary Bladder and Pelvis of the Kidney," George N. Kreider, Springfield; "Unusual Features of Mastoid Diseases," F. P. Norbury, Jacksonville; "Cases Illustrating Types of Cerebral Hemorrhage," S. P. Cargill, Mason City. The next meeting will be held in Jacksonville.

American Public Health Association.

Twenty-seventh Annual Meeting, Held in Minneapolis, Minn., Oct. 31-Nov. 3, 1899.

FIRST DAY—MORNING SESSION.

Out of a membership of nearly 1000 about 125 were present at the opening session.

ETIOLOGY OF YELLOW FEVER.

DR. H. B. HORLBECK, Charleston, S. C., chairman of the committee appointed on this subject, presented this report, which was a résumé of the work already done on this question.

YELLOW FEVER IN MEXICO.

DR. EDWARD ENARDO LICEAGO, president of the Superior Board of Health of Mexico City, sent a report covering the cases observed by the Mexican Republic from Sept. 12, 1898, to Sept. 15, 1899. Among other things the report stated that yellow fever appeared in September last in Orizaba, Mexico, for the first time, this city having always been considered immune. Previous reports state that yellow fever does not appear above a height of 1008 meters.

DATA, WITH BACTERIOLOGIC STUDY OF YELLOW FEVER.

DR. ISMAEL PRIETO, assistant bacteriologist of the Superior Board of Health of Mexico City, sent this paper, which was, as was the paper above, read by Mr. Joseph Romero, one of the secretaries of the Mexican Embassy in Washington, D. C.

DISINFECTION OF VESSELS.

DR. MARCISO DEL RIO, Vera Cruz, Mex., submitted a paper entitled "Necessity of Making a Complete and General Disinfection of the Vessels in Order to Make It Efficacious, Proving That Partial Disinfection Is Useless in Cases of Yellow Fever," also read by Mr. Romero.

YELLOW FEVER A PREVENTABLE DISEASE.

DR. ANTINIO MATIENZO, Tampico, Tamalipas, submitted this paper, read by Mr. Romero, which was discussed with the above.

DR. C. P. WILKINSON, New Orleans, La., advised the use of mercuric bichlorid, 1 to 800, when washing the wood-work of the vessel, also dioxid fumes. Formaldehyde is used by the United States Government almost altogether, steam in some instances. When the application of disinfection is limited, then cremation and even burning of houses, bedding and wearing apparel is often resorted to. Formaldehyde is rapidly taking the place of other disinfectants and is employed in scarlet fever, diphtheria and smallpox as well as in yellow fever, by being sprinkled on the sheets in globules, two or three sheets being thus utilized. The holds, cargoes and engines of vessels are not touched by disinfectants. The portions occupied as sleeping apartments, etc., are treated with dry heat and steam. With 2000 thus disinfected, yellow fever only appeared subsequently in four.

DR. W. A. R. TENNEY, Cincinnati, Ohio, pointed out that formaldehyde is a very certain method.

DR. F. MONTIZAMBERT, Ottawa, Canada, related his experience with a vessel which recently arrived from the Black Sea, with cases of smallpox. (JOURNAL, September 2, p. 621.)

DR. L. V. CABANA, Fall River, Mass., spoke of the French disinfectant called "germol," which he had used in solution for the past few years with success.

DR. L. H. MONTGOMERY, Chicago, inquired of Dr. del Rio whether the statement was true that yellow fever prevailed in Vera Cruz the past summer to the extent that twenty-five to fifty deaths occurred.

DR. DEL RIO answered negatively.

DR. H. B. HORLBECK, Charleston, S. C., urged that we exert our influence with the authorities at Washington, D.C., to get the government to send a commission, as recommended in his report referred to above, to some of these infected cities to study the disease.

INFLUENCE OF FORESTS ON PUBLIC HEALTH.

DR. H. M. BRACKEN, Minneapolis, Minn., presented a communication from the state fire warden, regarding the proposed National Park in that state, and read a paper with the above title, by Dr. Brenna, Zacatecas, Mex.

PROF. JOHN T. SMOCK, Trenton, N. J., sent a paper on the same subject, the two being discussed together.

DR. BENJAMIN LEE, Philadelphia, Pa., advised the organization of a voluntary foresters' association or special arbor days

in schools for tree planting as an object-lesson to the children.

DR. G. T. SWARTZ, Providence, R. I., introduced a resolution to the effect that the planting of trees in large parks one day in the year should be indorsed, and that the Association be requested to use its influence for the reservation of large forests in Minnesota. This was referred to the executive council.

FIRST DAY—AFTERNOON SESSION.

HYGIENIC LABORATORIES.

PROF. W. H. WELCH, Baltimore, Md., gave some interesting data on this question. The first chemical laboratory was founded by von Liebig, in 1820 or 1830, and the first hygienic in 1878, by Pettenkofer of Munich. Professor Welch dwelt at length on municipal and state institutions and private laboratories in general, and stated that probably not to exceed four or five hygienic ones are connected with American universities, as they are expensive to operate and not largely patronized. The patronage of such municipal laboratories by physicians gives them fields of usefulness in the diagnosis of scarlet fever, diphtheria, etc. He favors an organization of the working bacteriologists, and making it a section of the Association, to meet a day preceding the annual meeting if desired.

EDUCATIONAL INSTITUTIONS AND THE SERVICES OF IMPORTANT COMMERCIAL WORK.

MRS. ELLEN H. RICHARDS, Boston, read a paper on this subject. For municipal and state laboratories she had only praise as to their effect on the education of the public. Though her own state is supposed to take the lead in sanitary matters, the death-rate has not been perceptibly lowered in the past forty-six years. She censured the present chemical commercial bacterioiogist who furnishes the results of analyses for a fee, for the benefit of private individuals, and said that such results should not be accepted as authoritative as results from municipal laboratories.

PRESENT EXPERIENCE ON DISINFECTION.

DR. WYATT JOHNSON, Montreal, Canada, presented this topic, giving his experience relating to formaldehyde since it came into use. He prefers this to steam unless the disinfection has to be quick. He has not found that pressure applied with formaldehyde gives better results than its use without pressure. The details of using other disinfectants were entered into minutely.

DR. C. P. WILKINSON, New Orleans, La., inquired whether heat had much to do with the efficiency of the gas.

DR. AMAND RAVOLD, St. Louis, Mo., spoke of a case of smallpox in a traveling man who came to his city in a Pullman sleeping-car, supposedly contracting the disease therein. He dwelt at length on the Pullman method of disinfection, also disinfection for scarlet fever.

DR. SPRAGUE, of the marine-hospital service, gave his experience in the use of formaldehyde to kill anthrax bacilli. He stated that ammonia and free exposure of air removes the formaldehyde after disinfection.

DR. A. GEHRMAN, Chicago, described the method of disinfection by formaldehyde in his city. Sheets suspended by the corner are used, sprayed with formaldehyde, the time limit being four hours at least, longer if possible. He said that the Chicago method had been adopted by the Pullman company.

DR. J. N. HURTY, Indianapolis, Ind., suggested the use of an anatomizer propelled by compressed air, for disinfecting railway coaches, the formaldehyde, mixed with glycerin and water, being blown over the plush with a hose. He found that diphtheria germs on the back of the car seats were destroyed in every instance.

DR. F. C. ROBINSON, Brunswick, Me., spoke of some plans to be formulated for the disinfection of glazed surfaces, glass, varnish, etc.

DR. H. B. HORLBECK, Charleston, S. C., uses pastilles which evolve the gas rapidly, and their simplicity commends them. From 200 to 500 of these pastilles are used.

DR. S. H. DURGIN, Boston, said 20 ounces of the saturated solution to 1000 cubic feet of space was the minimum used in his city.

DR. WYATT JOHNSON thought 20 ounces rather an excessive amount for 1000 cubic feet of space, 8 ounces usually being regarded as sufficient, or an even pound to make the disinfection positive. In answer to a query, he answered that he had not used glycerin with formaldehyde, and that a strong formaldehyde gas will not so rapidly disinfect where particles of grease, for instance, have accumulated in the bristles of a brush.

FIRST DAY—EVENING SESSION.

This session was largely devoted to addresses of welcome by the mayor, president of the state university, president of the Hennepin County Medical Society and others.

PRESIDENTIAL ADDRESS.

DR. HENRY MITCHELL, president of the Association, delivered his presidential address. He eulogized the late Dr. Geo. N. Rohé, who a year ago received the highest honor within the province of the Association—the presidency. He referred to the organization of the Association, in 1872, to recent sanitary progress, and expressed gratification that the post-office departments of the three countries of North America have, in response to the advice and request of the Association, permitted the transportation of specimens for examination in the laboratories, and that the work of these institutions has been greatly aided by the judicious adaptation of the postal regulations to the necessities of their operations.

He said: "Considerable progress has been made toward the adoption by state and municipal registration authorities in the United States, of a system for the classification of deaths, uniform with that already in operation in Mexico and Canada and in various European countries, and it is to be hoped that before the beginning of the year 1901 this movement will have found favor in many additional registration districts. This Association is to be congratulated on the assistance which its influence has exerted in forwarding this very desirable improvement in the classification of deaths, and the judicious activity of those members to whom this subject was entrusted is worthy of high commendation.

"The medical profession has ever evinced an active interest in preventive measures for the suppression of disease, and within the past few years this interest has increased in keeping with the advances made in knowledge concerning the nature of numerous affections which have been added to the list of those proved to be communicable, and this increased interest is indicated by the striking prominence recently given to public hygiene in various leading medical organizations. There has been no abatement in the battle against this profession on the part of the self-styled 'Christian Scientists,' divine healers, *et al*, including antivivisectionists, the illogical tenets of whose faith continues to attract to their ranks a certain class of silly people—a class which betrays in its fanatical adherence to preposterous and obstructive vagaries unmistakable evidences of mental irresponsibility, becoming easy prey to the designing charlatans who reap a financial harvest by pretending to cure disease by incantations or other unscientific processes."

He pointed out that during the existence of the Association, legislation designed to protect and promote the public health has been obtained in almost all of the states within the territory represented in the membership, and efforts are now being made to secure a greater degree of uniformity in these enactments and in the methods to be pursued in their enforcement, at least in so far as they are related to interstate questions.

"That legislatures have finally advanced more rapidly in providing authority for sanitary undertakings than local boards of health have proceeded in the execution of the laws, is apparent, and one of the next steps forward in promoting public health interests on this side of the Atlantic will consist in the extension of facilities for the instruction of the persons who are intending to pursue the business or occupation of sanitary inspectors." He said that "sanitary inspection has been recognized by a few institutions of learning in the United States, as an art which demands on the part of its practitioners careful preparation for the duties and responsibilities of their calling, and instruction has been offered to those who are already engaged in the work of san-

itary inspection, and also to those who may desire to take up this employment.

"Objection is made that no system for the instruction of sanitary inspectors can be satisfactorily conducted until the service of those who become competent to perform the duties demanded of these officers shall be better appreciated by the public, and be better paid by municipal authorities, but it appears that the supply must anticipate the demand in this instance, otherwise local sanitary authorities will have no opportunity of learning the advantages which attend the employment of men who have been properly prepared to perform the complex and highly skillful labors required in detecting and curing the various conditions which endanger or impair the public health. Who without training is qualified to expose the dangers which exist in the food-supply; to investigate and point out errors or fraud in the plumbing, ventilation and drainage of buildings; to disinfect dwellings; to direct measures for the prevention of the spread of communicable diseases? Shall we doubt that as soon as suitable institutions shall have fully established the requisite courses of instruction, that applicants will appear who will desire to prepare themselves for appointment to positions in the employment of municipalities, and that boards of health will be disposed to secure the service of trained men, and be willing to recommend the payment of reasonable compensation?

"A sanitary education is no less needed for administrative officers than for inspectors, and it is to be hoped that the colleges and universities of America will soon follow the example of the sixteen English institutions which now offer a post-graduate course in hygiene, and grant diplomas in public health."

Relative to the reduction of mortality which has attended intelligent application of the newly-acquired knowledge of the etiology of certain communicable diseases, he said that "the most important element in the enormous saving of child life which is now occurring consists in a better understanding of the dangers attending the use of unclean milk, and it is reasonable to believe that still more gratifying results are to follow, for thus far the protective measures against infected milk have been almost entirely applied to this article of food after it is delivered to the consumer, but when producers shall intelligently and faithfully adhere to the laws of asepsis in the collection, cooling, storage, transportation and delivery of milk, then will we be able to learn the true value of hygiene, so far as it affects the food of infants. . . . By aid of the lactometer the dealer is able to 'water' and 'skim' with a high degree of skill, and the consumer has the satisfaction of receiving a product having almost unvarying uniformity as far as its specific gravity is concerned, and if the water is taken from an uncontaminated source, the seller and buyer may adjust the dilution question by an adjustment of the price. But cleanliness of the milk and its freedom from pathogenic bacteria constitute another and very much more important line of inquiry for the sanitary officer, and he recognizes the demand which consumers are making for milk which is produced on clean premises, by clean persons, and which is collected and sold under conditions which protect it against contamination."

He spoke of typhoid fever, its prevalence in the camps in the late war justifying its selection as a typical illustration of the value to the public health of a rigid application of the principles of hygiene, and said that: "The omnipresence of the colon bacillus shows to what a surprising extent the human animal, even in this enlightened age, defiles the localities in which he dwells—the soil, the water and the food being contaminated so often that this condition may be regarded as usual and ordinary, and avenues for the dissemination of typhoid fever may therefore be considered to be always open."

He also spoke of the indifference of the masses as to vaccination, and went at length into the subject of tuberculosis. "Conservative recommendations for checking the prevalence of tuberculosis include: 1, inspection of all bovine animals, meat, dairy products and dairy premises; 2, destruction of diseased animals and prohibition of the sale of diseased meat and milk; 3, exclusion of diseased persons from markets, dairies and other premises where food is prepared or sold; 4, frequent and regular disinfection of public conveyances and places of public assembly; 5, disinfection of all infected apartments after death or removal of patients."

In speaking of local sanitary administration, he said that: "Until local sanitary authorities, particularly those in small municipalities and in rural districts, shall become more efficient than they are at present, the influence and assistance of state boards of health are not measurable. Municipal concerns become yearly more complex and the relations which they bear to one another become more numerous and more in need of adjustment. It is more difficult every succeeding year to obtain special local powers by legislative acts, and certain conditions affecting the public health must, of necessity, continue to be controlled by a central authority. In the better organized districts there is still but little uniformity in the application of the health laws and ordinances, and many communities are solving anew the problems which have already been worked out in other towns. The scope of the work of a state board of health varies in accordance with the sanitary progress already made in the commonwealth, and is also greatly modified by geographical, financial and numerous other conditions and considerations.

"The necessity for establishing in the United States a national department of public health has been strengthened by recent events, the addition of tropical possessions having added new responsibilities to those already borne by the general government requiring investigations concerning the distribution and character of the preventable diseases occurring throughout the entire territory occupied by the nation. A department of health controlled, so far as its general course of investigations and executive action is concerned, by representatives of all of the states, is demanded by sanitarians almost without dissent. Let us hope that before the dawn of the new century Congress will have provided the necessary legislation, and that all questions relating to maritime quarantine and interstate restrictions during the prevalence of epidemics will be administered by a central representative body."

(To be continued.)

Vermont State Medical Society.

Abstract of Proceedings of the Eighty-sixth Annual Meeting, Held in Burlington, Vt., Oct. 13, and 14, 1899.

(Concluded from Page 1167.)

SECOND DAY—MORNING SESSION.

ADENOID GROWTHS OF POST-PHARYNX.

DR. GEO. H. GORHAM of Bellows Falls read a paper on this subject. He stated that there is a general lack of knowledge in the profession in regard to adenoid vegetations, due to the fact that the subject has been neglected by writers of general text-books, and those in medical journals, as well as by the professors in our colleges. Adenoids are of two varieties, the soft and the hard, and occur in children of all ages, up to adult life. In the cases of his observation there were 25 per cent. more females than males affected, and 75 per cent. had middle-ear trouble and 50 per cent. hypertrophy of the faucial tonsils.

There is but one effective method of treating these growths, and that is to remove them under an anesthetic. He prefers the upright to the horizontal position for operating, and does not believe a thorough operation can be done with the finger-nail, but advocates the use of Gottstein's curette, or the Lowenberg forceps, or some modification of these. The after-treatment consists in the use of an antiseptic spray. Most cases show marked improvement in the general health after the operation.

OPERATIVE TREATMENT OF UTERINE FIBROIDS.

DR. F. A. L. LOCKART of Montreal presented a paper on the above subject. He said the first point to be considered is *when to operate*. This should not be until after medical treatment has been tried thoroughly and has failed. If the growth is increasing in size, some operative method should be tried without delay, especially if the patient be near or past the menopause, as then malignant degeneration is liable to take place. Again, where the tumor is impacted in the pelvis, and the uterus contains a growing ovum, the only way in which room can be obtained for delivery *per vias naturales* is by

removal of the growth. Excessive hemorrhage, degenerations of the tumor, carcinomatous or suppurative, and pressure or neurotic symptoms also call for prompt operative interference. Where a uterine fibroid is lying perfectly quiescent and giving no trouble, it should be left severely alone.

The nature of the operation to be performed will depend on the indications for interference and the site of the tumor. The operations are as follows: 1. Curetting. 2. Ligature of the uterine arteries per vaginam, i. e., Martin's operation. 3. Oöphorectomy—Tait's operation. 4. Myomectomy, by enucleation or otherwise. 5. Hysterectomy; *a*, total—1, abdominal; 2, vaginal; 3, abdomino-vaginal. *b*, supravaginal.

Curetting is merely a palliative measure, as is also, in many cases, ligature of the uterine arteries. The latter operation is contraindicated: 1, where the tumor is either submucous, or subserous; 2, where it has risen out of the pelvis so that the bases of the broad ligament can not be reached; 3, where the patient is near the menopause and has a large tumor which has suddenly taken on activity, the tendency of such a tumor to become malignant being much greater than where it is of small size.

Removal of the appendages ought to be merely a dernier resort, as it practically never cures, and does not always even relieve.

Myomectomy is to be chosen: 1, where the tumor is submucous and pedunculated; 2, where it is subserous and either has a pedicle or its border is well defined; 3, where several small nodules lie immediately beneath the peritoneum.

Total hysterectomy is indicated: 1, where the tumor is submucous and not pedunculated, and the cervix can not be dilated sufficiently to allow of morcellement; 2, where the tumor is either interstitial, large and subserous without a pedicle, soft, fibrocystic or undergoing degeneration; 3, where the tumor is complicated by diseased adnexa. Although hysterectomy is the most radical operation, it is the one employed by most operators on the continent of Europe and on this side of the Atlantic, for the following reasons: 1, if the patient recovers there can be no return of the disease; 2, in the hands of a skilled operator it is less dangerous than myomectomy by enucleation or morcellement. The writer prefers complete to supravaginal hysterectomy, claiming that the removal of the cervix does not add to the gravity of the operation, and further that there is not so much shortening of the vagina following complete as partial hysterectomy. As to the choice between vaginal and abdominal hysterectomy, he said the two should not be considered as rivals. The former is adapted to cases of small tumors, which may be readily reached and where the passage is roomy. All fibroids larger than a fetal head should be removed by total abdominal hysterectomy. The writer prefers vaginal hysterectomy with ligatures, rather than with clamps.

ECLAMPSIA.

Dr. F. L. Brigham of Pittsfield, in his paper on this subject, said that eclampsia is a symptomatic disorder characterized by convulsive or epileptiform seizures that suddenly come on prior to, during or after labor. Its frequency is about 1 in 500 pregnancies, and the death-rate nearly 1 in 700 confinements.

The most important premonitory symptom is headache. Other symptoms are vertigo, gloomy forebodings, flashes of light, contracted pupils, amblyopia, sometimes amaurosis, ringing in the ears, nausea, vomiting, dyspnea, edema of the face, labia majora and extremities, and finally and of most importance, the presence of albumin and casts in the urine.

Treatment is preventive and curative, the former by far the most important. Treatment consists in opening the bowels, preferably by salines, the administration of bromids and chloral, and chloroform to control the convulsive seizure, the administration of fluid extract of veratrum viride, pilocarpin hypodermically, and bleeding. The writer believes that veratrum viride is a remedy that will successfully supplant the use of the lancet in the treatment of puerperal eclampsia.

PUERILE INDIGESTION.

Dr. F. C. Morgan of Felchville read a paper with this title. He said that the most perplexing matter confronting the physician in the treatment of infantile diseases, is the nursing bottle. In all cases of indigestion in infants the first attention should be paid to the clothing, hygiene and diet. If the child is nursing, be sure the mother's milk is of good quality. If the mother is debilitated, give her tonics, such as iron, quinin, strychnia, hypophosphites, etc., and sometimes lactophosphate of calcium.

If the child is bottle-fed, the trouble may be with the quality of the food. Unmodified cow's milk is unfit for infant feeding. In many cases peptonized milk, with the addition of sugar of milk and cream in proper proportion is the best food. Other patients thrive best on some of the prepared foods, and in serious cases of indigestion he finds malted milk the best.

PNEUMONIA: ETIOLOGY AND TREATMENT.

Dr. D. L. Burnett of South Royalton presented a paper on this subject, in which he said that treatment is of little value in shortening the length of the disease. Lobar pneumonia is caused by two germs, the pneumococcus of Friedlander and the diplococcus of Fraenkel, the latter being most virulent, and present in about 75 per cent. of cases. Staphylococcus and streptococcus infection are also etiologic factors of importance.

Treatment has undergone marked changes in the last half century. Venesection is now rarely practiced. In 90 per cent. of the cases an initial dose of mild chlorid is indicated. After unloading the bowels, put the patient well under the effect of opium and hold him there for two or three days until the sudden shock to the nervous system is somewhat relieved. Antipyretics are seldom indicated. Excessive fever may usually be controlled by cold sponging. Watch and treat the heart. Glonoin, strychnia, spirits of camphor, aromatic spirits of ammonia and brandy are valuable. Expectorants are not indicated, as a rule. Allow plenty of water. Insomnia is often relieved by hyoscyamin. Counter-irritation is of little value in the first stage of the disease. When resolution is delayed, small fly blisters are valuable. Keep the chest warm by means of a cotton jacket. Give easily digested food often and in small quantities. During convalescence give tonics, especially iron and strychnia, with the vegetable bitters. If resolution is delayed, iodids are of use, especially iodid of ammonium.

SURGERY IN ITS RELATION TO FEMALE PELVIC ORGANS.

Dr. J. B. Wheeler of Burlington presented a paper with the above title. He said that a decided reaction has set in against the radical surgery of the female pelvic organs which was so prevalent a few years ago. We are told that we operate too often and too radically and are advised to use more discrimination in the selection of cases for operation and, when we do operate to stop short of the total ablation of organs and remove only such portions as appear to be diseased. In at least one respect this conservatism has proved beneficial. It is nowadays hard to find an operator who is willing to remove apparently normal pelvic organs with the expectation of relieving symptoms whose origin is in the central nervous system. It does not follow, however, that organic disease of the pelvic viscera does not require operative interference. That many practitioners do not appreciate this trite statement is shown by the women who come to us with advanced disease of the ovaries, tubes and uterus, for which they have been treated for months or even years with nothing but tonics, anodynes and local applications.

If indiscriminate operating is often responsible for the sacrifice of healthy organs, reluctance to operate also has a heavy responsibiltiy to bear in the shape of the invalidism which it fosters. There is no question of unsexing a woman who is already unsexed by disease. The only question is, whether her sufferings shall be ended by the removal of their cause. The conservatism which saves organs rather than health, is not a true conservatism.

Partial operations are advocated by some of the ablest gynecologists, with a view to preserving normal tissue and normal functional activity. This is a most desirable object and the efforts which are being made in this direction are interesting and praiseworthy. But when functional activity is hopelessly depraved, or when it has ceased altogether, it is not worth while to make much of an effort in its behalf. And when a partial operation is followed by the same symptoms which preceded it, and these symptoms disappear after the performance of a second and complete operation, the first one does not seem such a conservative proceeding as it did when it was done. Such cases occur often enough to show that there is quite a proportion in which disease is more extensive than it appears, and that in such cases complete removal of the

diseased organs is more efficacious than the most skilful partial operation.

The principal objections urged against radical operations on the female pelvic organs are: 1, that the patient is rendered sterile; 2, that she is rendered coarse and masculine in appearance and voice; 3, that such operations often produce insanity.

The first objection has great weight in the case of a young woman, but not in or after middle life. The condition to which the second objection refers, is very uncommon and greatly exaggerated. On the question of the causation of insanity by radical gynecologic operations, authorities differ. But as these operations are done more often than any others, on patients whose minds are already somewhat unsettled, they may be followed by a larger number of cases of insanity, but if any other equally severe operations were performed on such patients, the effect on the mind would be the same.

Partial operations have not yet been done in sufficient numbers, nor for a long enough time, to enable us to draw definite conclusions as to their value. The following propositions, however, are submitted: 1. In operative gynecologic cases, the best prospect of a complete and speedy restoration to health is afforded by a radical operation. 2. In the case of a young woman, with most of her child-bearing life before her, it may be justifiable to offer the less reliable aid of a partial operation, in order to give her every chance to preserve the function of reproduction. 3. In the case of a woman approaching the menopause—and *a fortiori* if she has passed it—there is no valid reason for refusing to give her the benefit of a radical operation.

RESOLUTION ON MEDICAL LICENSURE.

The following was unanimously adopted:

Resolved, That the Vermont State Medical Society most heartily endorses the movement inaugurated by the Wayne County (Mich.) Medical Society, looking toward an equal system of licensure for medical practitioners throughout the various states, or a system of reciprocity between states having essentially the same requirements. (See JOURNAL, September 23, p. 799.)

Officers were elected as announced in the JOURNAL, October 28, p. 1097.

Chicago Academy of Medicine.

Sept. 22, 1899.

(Concluded from Page 1167.)

RELATIVE TOXICITY OF COCAIN AND EUCAIN.

DR. A. H. PECK presented this paper, which may be read in the JOURNAL of September 9.

DR. JAMES G. KIERNAN—There are a number of stomatologic, pathologic, rhinologic, opthalmologic and other relations, as well as a number of general therapeutic relations, of cocain and eucain which deserve discussion. In the first place, these experiments deal with what the Germans have called the etiologic moment. This is constituted by the peculiarities of the individual generally as well as at the time the therapeutic or pathologic influence is exerted. In dealing with guinea-pigs this factor must not only be taken into consideration, but also certain local factors affecting the drugs with which experiments have been made. Guinea-pigs belong to the rodents. The rodents and pachyderms are closely connected. The pachyderms—e. g., the horse—whenever the kidneys are out of order, express it by paraplegia. In Dr. Peck's experiments it is rather strongly noticed that cocain has expressed itself very frequently in the guinea-pig by paraplegic conditions. This should be expected from the relationship just cited. Furthermore, in dealing with cocain, as well as any agent which exercises a gastro-intestinal inhibitory influence, and therefore means a certain amount of hepatic and renal influence, some of the conditions which he has described must be expected. If there be gastro-intestinal and renal and hepatic inhibitory influence exerted, there will frequently occur conditions irrespective of action per se. Another peculiar thing is likely to occur. The kidneys, liver and intestines do not act properly. There will then be certain stomatologic phenomena, since to a certain extent the gums are going to take part in the stomatologic excretion. Dr. Peck pointed out that while cocain exercised just exactly this condition, it is much more likely to be followed by changes around the gums, and, I may state, around the tonsils in connection with pathologic changes. He is not inclined to refer them to bacteriologic infection, but it should be remembered that there are two factors in bacteriologic infection; the individual who is infected and the bacteria. In this case an excellent culture-medium would be provided for the bacteria by the cocain, and precisely these conditions would result.

Clinically, I can support Dr. Peck's experiments from a psychiatric standpoint. At one time it was a favorite theory that cocain was excellently adapted to the treatment of melancholia. If there be any psychic condition which furnishes a beautiful culture-medium for a number of bacteria, it is melancholia. The intestinal and the general atony are suitable for this condition. While cocain has a psychic stimulant effect, it also has a gastro-intestinal inhibitory effect, and the melancholiac who got cocain or coco for treatment used to be a beautiful subject, not so much for infection by the mouth, as for conditions like Reynaud's disease, and this latter took the direction of gangrene.

DR. HENRY GRADLE—Dr. Peck emphasized the inconstancy of the anesthetic effect of cocain. This opinion is not borne out by clinical experience. Cocain produces the same degree of anesthesia under the same circumstances in every case. The anesthesia fails under conditions with which we are familiar. For instance, in the case of the eye, we can not induce thorough anesthesia whenever the conjunctiva is congested or whenever there is intense ciliary injection. If we can control the congestion with suprarenal extract, the cocain effect will be obtained every time. The same thing applies to nasopharyngeal cases when there is an inflamed surface. The cocain, although evidently absorbed, is carried off too rapidly to produce any lasting anesthesia. But with an absence of active hyperemia, we can depend absolutely on the influence of the cocain; we know how far it penetrates for a given class of operations; we can predict with certainty to what extent it will make them painless. Moreover, the experiments made on animals referred to the general anesthetic effect of cocain. That is not what we seek by its local influence in minor surgery; we want only its local effect, and that seems, as far as my experience goes, unalterable and always to be relied on.

It might be an interesting topic to bring out some of the experiences of the various members on the untoward toxic effects of the drugs. I have never seen serious physical symptoms produced in a fairly large experience in surgery of the nose and pharynx, while in the eye the toxic effects need not be expected, and are indeed rarely recorded in literature. But in the nose and pharynx I have used it in liberal quantities—20 per cent. solution—to the extent of perhaps ten to fifteen drops, applied on cotton, with the precaution, however, not to have the cotton dripping wet. In two instances I have found excessive talkativeness amounting almost to delirium, but there were no delusions present. The patients could be reasoned with, but they possessed an uncontrollable desire to talk. They could not overcome their feeling of fear, and while they were amenable to reason, still their actions were almost beyond their control. There were in these two cases no physical signs that gave the least alarm. The local faintness often seen in connection with nasal operations I attributed more to the mental influence of the operation itself than to the cocain.

After an interval of many years I have again seen three instances of slightly unpleasant effects from the drug in rapid succession, and it occurred in three young children on whom I operated in one week, for adenoids in the pharynx. The effect was simply uncontrollable talkativeness without depression. In these three instances I used cocain from the same bottle (Merck), having procured it from the druggist in our building. There were no physical symptoms which gave rise to any great alarm.

DR. CHRISTOPHER—What were the subsequent effects in those cases? Was there secondary depression?

DR. GRADLE—No.

DR. W. S. CHRISTOPHER—The reason I asked a question is because, on three occasions, cocain has been used on me. At one time talkativeness was seemingly not developed, but the second time it was to an extreme extent. The drug was used by

a fellow practitioner, in a nasal operation. I was not aware of the condition. In both instances the depression which followed the use of the cocain in about two hours was the worst I ever experienced. So unpleasant were the results that subsequent operations on my nose—four of them—were made without the drug. Although there was pain, it was not to be compared with the former unpleasant effects.

On another occasion cocain was put into my eye on account of irritation from a foreign body. One drop of a 2 per cent. solution was employed. The result was paralysis of the muscles of accommodation, for a week, and complete dilatation of the pupil. The local effect was quite different from what atropin would give.

Dr. Norval H. Pierce—Dr. Peck has endeavored to direct our attention to the toxicity of cocain, and not so much to the fact that it is a reliable anesthetic, and I quite agree with him that it is capable of the most untoward manifestations. I have been unfortunate enough to see two cases of what I regarded as dangerous toxic effects from it. One, a plumber, of Scotch birth, who impressed me as being in vigorous health, came to my office with an elongated uvula. I used 5 per cent. solution on a pledget of cotton, making three applications at three different times. At the end of the last application he suddenly became pale. Diaphoresis set in with exophthalmos, and he slid out of the chair unconscious. I worked with him over half an hour, before he regained consciousness.

In another case I removed a polypus from a dentist's nose He presented the same symptoms after about the same amount of cocain was used. I do not use a solution without more or less apprehension; in fact, I never use it now in solution in my private practice, but employ the powder, and have never seen a case of poisoning from it. I use 25 per cent. cocain in sugar of milk. In hysteric women, innumerable manifestations may develop from the administration of a very slight amount of cocain; they exaggerate their heart and nervous symptoms, but I would regard these of particular moment. The two cases I have seen, however, of poisoning from an infinitesimal amount, have led me to regard it as a rather dangerous drug.

I am glad that there are other drugs coming into the market which are not nearly so dangerous, for instance, eucain "B," and nirvanin. I have used the latter in half a dozen cases of excision of the tonsils; the anesthesia has been quite satisfactory and no toxic effects have occurred in my cases, nor have any been reported. It is injected into the tissues, as it is not absorbed from the surface as in cocain.

Dr. Carl Beck—I have been much interested in the local untoward effects of cocain, as mentioned by the essayist. If I understood him correctly, it was a gangrene. Such effects must not be the result of the drug itself, but of ischemia, due to the injection. We all know that the injection is followed by a pathologic condition of the skin, which passes off in many instances, but it is deleterious after operations. If we make a small incision under cocain injection, we notice that very often the borders of an incised wound do not heal by primary union; there is frequent local swelling and sloughing of the tissues, especially of loose connective tissue, like the tissue of the eyelid or prepuce. If cocain or even water has been injected into such tissues, the consequence is a transitory ischemia or a permanent one with deleterious effect on the tissues. This has been proven by the use of the Esmarch bandage previous to the injection of cocain, an artificial ischemia having been produced by it.

In the *Centralblatt fur Chirurgie*, there has been quite a controversy recently as to the use of the Esmarch bandage previous to injections of cocain, and the beautiful results that are obtained by such anesthesia. If I remember rightly, it was Kofman of Odessa who first suggested it, and Professor Braun, Hofmeister and others have used this constriction on fingers and limbs to produce better anesthesia with cocain injections, and they have in almost every case observed poor healing. Some times there has been extensive gangrene after such constrictions and the use of cocain, so I think the Doctor is right when he states that it is not infection that has caused the gangrene of the gum, but it may be simply the injection of fluid which constricts the tissues, especially the tissues of the gum which, if constricted for a sufficient length of time, will produce necrobiosis and consequent necrosis of those tissues. But cocain also causes a contraction of vessels and ischemia. We do not exactly know in every case the untoward effect of the drug; it may be due to ischemic processes.

Dr. Norval H. Pierce—Ten or twelve years ago there was quite a controversy relative to the use of this drug in the eye for the removal of foreign bodies, etc. A number of cases of ulcer had occurred after its use, with sloughing of the conjunctiva. I would like to ask Dr. Gradle in regard to it.

Dr. Gradle—I do not recall that there were any accusations made of the untoward effects of cocain to that extent, but it is almost universal belief among ophthalmologists that the drying effect on the corneal epithelium is undesirable in corneal disease, and that the use of cocain should be restricted very much in cases of corneal ulcers; but that cocain directly should cause ulceration to follow infection by a foreign body, where without it the infection would not spread, I hardly think has been maintained.

Dr. William L. Baum—In genito-urinary work, untoward effects have been frequently noted in connection with the use of cocain. Quite a large proportion of genito-urinary surgeons have reported fatal cases from injections of the drug into the urethra. It is difficult to find out exactly how important a part the cocain injection plays in the individual case. I use practically no cocain at all in genito-urinary work. At one time, however, I employed it extensively. I have had two patients who suffered from symptoms supposed to be typical of cocain poisoning. In cases where the drug has not been used, mere passage of the sound, or its first introduction, is followed by identical symptoms: faintness with labored respiration, irregularity of the heart's action and the usual signs of shock. I have discontinued its use on account of its unpleasant after-effect on the tissues locally. When cocain is used extensively in venereal work, infectious processes which follow its use are much more prolonged and decided in their action. In other words, the first effect is an almost anemic condition of the parts, followed by dilatation of the capillaries and by enormous edema. A more favorable culture-medium results. The question arises as to whether this be due to constriction of the neighboring parts, or to the vasodilator and vasoconstrictor nerves as the local influence. Probably the first effect is paralysis of the vasomotor dilator nerve, and the secondary one of entire inhibition of the opposite side. The operation for phimosis is one which is not well done with cocain as a local anesthetic.

Another feature which has attracted particular attention is that where local anesthesia has been used, or the anesthetic locally applied to the mucous membrane of a surface, and subsequently general anesthesia, almost invariably untoward effects occur, followed by general distressing symptoms. In fact an almost fatal case occurred in my office some years ago from this combination. In every instance where it has been employed I have had unpleasant effects. Perhaps Dr. Beck and others have had similar experiences. Dr. Pierce will remember a case in which local cocain anesthesia had been used for phimosis, with most unpleasant termination. I have seen no other very ill results, although many such have been reported in genito-urinary work.

Dr. William Cuthbertson—To prove the untoward effects which Dr. Baum has mentioned in genito-urinary surgery, I would mention the fact that there are quite a number of fatal cases on record where cocain has been used for local anesthesia in operations on the rectum. We all know that the rectal tissues, as well as the genito-urinary, are rather hard to anesthetize, and consequently it requires, in the majority of cases quite a free use of the drug in order to produce anesthesia. It is the general trend of surgical opinion that cocain is not a safe anesthetic for any operations on the rectum or genito-urinary apparatus.

So far as its local destructive effects are concerned, I have had some experience in its use in circumcisions, where rather an extensive sloughing has taken place afterward. I was at a loss to satisfactorily explain the cause of this local gangrene. I can readily account for it now by the condition of ischemia, which Dr. Beck has mentioned to-night.

Dr. Peck, in closing the discussion, said that in regard to the proposition as to the local anesthetic effects of cocain there can be no question. It is, as has been stated, a reliable local anes-

thetic; it will always produce anesthesia, as stated in the paper, when properly applied. So far as its action in this connection is concerned, there was no disagreement between those who discussed the paper and Dr. Peck. But the paper was intended to deal especially with the toxic properties of the drug and the systemic toxic symptoms following its use, especially by injection. If the drug is used locally, and not injected, no untoward symptoms will manifest themselves except in rare instances. He has used the drug extensively in his practice about the mouth, applying it locally, and rarely ever do untoward symptoms result. Anyone using it in operating on the nasal passages or throat, by injection, passing it directly into the circulation, will get a different experience.

PROFESSOR HALBERG—I would like to ask Dr. Peck if the oleate of cocain has been used to any great extent. I remember to have seen some reference years ago that the oleate would perhaps be a valuable agent for producing local anesthesia, without producing any untoward symptoms, probably due to the fact that it would give a more uniform absorption, and at the same time perhaps not be so penetrating as the watery solutions.

DR. PECK—I can speak only for the dental profession in answering the question, but the oleate of cocain, to my knowledge, has never been used in dental practice.

Philadelphia College of Physicians.

Section on Surgery, Oct. 13, 1899.

RELATION BETWEEN PROSTATIC ABSCESS AND POSTERIOR URETHRITIS, WITH TREATMENT.

DR. RAMON GUITERAS, New York City, presented this paper. He considers posterior urethritis nearly always due to extension backward of an anterior urethritis, as in gonorrhea. The most prominent symptoms are: frequent urination, tenesmus in the deep urethra and rectum, especially observed after micturition, with a slight amount of pus in the deposit. Usually there is a sense of pain in the perineum. Other symptoms are constipation, slight fever and general depression. Many cases of supposed posterior urethritis are now known to be due to inflammation of the seminal vesicles. It is best to make a rectal examination to find whether or not there is inflammation of the adnexa present. The complications of posterior urethritis are: prostatic abscess, prostatitis, congestion, senile atrophy.

Congestion of this part meant a hyperemia which may eventually lead to parenchymatous inflammation or abscess giving rising to chills, sweats, considerable fever, while the rectal examination detects presence of the enlargement. Abscess in these parts usually breaks into the urethra or rectum, and if in the latter, after defecation there will be a considerable amount of discharge giving rise to a suspicion of colitis. In one patient treated, an abscess present, an operation was decided on, but at the examination the abscess ruptured into the urethra, the abscess sac subsided quickly and the operation was not necessary. Inflammation of the seminal vesicles is usually detected by examination per rectum, when there is felt small nodules following the course of these ducts, the follicles and stroma of which are inflamed. Rectal symptoms of this condition are: a sense of foreign body in rectum, fever, and rectal tenesmus.

In prostatic abscess the gland will be found to be considerably enlarged. In this latter condition a fatal termination is rare, but may occur from septic phlebitis. In one instance he had known death to result from septic pneumonia. In extensive involvement of this organ the parts will feel flat and doughy and pit on pressure. The destructive process in abscess of the prostate means tissue destruction, and frequently will be found to exist small follicular abscesses which break into the urethra, leaving no trace behind.

Treatment of posterior urethritis resolves itself into both local and general methods. The bowels should be kept well open. Salines render the urine less irritating. Antispasmodics, such as hyoscyamus, are useful. Urethral injections of permanganate of potash and nitrate are also valuable. Diuretics, such as sweet spirits of nitre and acetate of potash, may also be used, as well as rectal suppositories. Although quinin is discountenanced, he has given it with benefit. Hot sitz baths, two or three times daily, and rectal irrigations of water at 110-115 F. may do good. Abscesses may be incised through should however be remembered that incisions in this region the anterior rectal wall, a semilunar incision being best. It are dangerous.

REMARKS ON POSTERIOR URETHRITIS.

DR. ORVILLE HORWITZ read a paper on this subject and spoke of the interest which the subject of gonorrhea should command by the general practitioner, owing to its frequency and its dangerous complications. When the posterior urethra is involved, the condition is a dangerous one. When the anterior urethra is the seat of inflammation, the complications would be herpes, chordee, etc., and when the posterior urethra, orchitis, epididymitis, cystitis and inflammation of the kidney. Gonorrhea is just as prevalent now as it has ever been, and the statement of Ricord that 80 per cent. of the adult males in large cities are affected by this disease shows its gravity.

In the treatment of follicular urethritis he recommends the passage of bougies, three times a week, together with gentle massage over the parts while the instrument is in place. Astringent injections may be of benefit. He considers protargol of value, or a local application of copper, or nitrate of silver applied through an endoscope.

If the bladder be involved, irrigation should be done, but indiscriminate irrigation of the bladder in these cases often does harm. Copaiba or cubebs often do nothing but injure the appetite.

TREATMENT OF GONORRHEAL RHEUMATISM.

DR. CHARLES H. FRAZIER, in his paper on this topic, said that to properly treat this condition one must necessarily know the essential pathology of the disease in its different forms. In some cases of what is considered gonorrheal urethritis there is infection by the gonococci alone, associated with other micro-organisms. In this disease we find: hydrops articuli, empyema of the joint, and phlegmon. In the first condition only clear fluid occurs around the joint. In empyema there is a mixed infection.

Treatment should be directed toward relief of pain and loss of function. Relief of pain can often be accomplished by immobilization of the joint and by application of heat or cold. After subsidence of the acute symptoms, the patient should be kept in bed, and on the affected part should be applied a rubber bandage or adhesive plaster. From the fact that the parts should be frequently exposed, the rubber bandage has its advantages. Massage does good. In cases of empyema of the joint, incision and free drainage should be done. Should phlegmon lead to ankylosis of a fibrinous or bony character, the application of a plaster cast, or the inunction of mercurial or belladonna ointment may be of advantage.

DR. J. H. BRINTON, in the discussion of the papers, spoke of the treatment of urethritis, which years ago had been a very active one, somewhat later more soothing, but now we are again hearing of the active method again being employed. He desired to know the strength of the protargol used by Dr. Horwitz, and whether any bad effects had been observed.

DR. HORWITZ replied that in acute cases he had used the drug in the strength of a .5 per cent. solution, and in chronic cases of posterior urethritis, in 2 per cent. solution, and had never seen any bad effects following its use.

TREATMENT OF URETHRITIS IN THE FEMALE.

DR. GEORGE ERETY SHOEMAKER then read a paper on this subject. This condition he considers a formidable one. The seats of infection vary, and it must be combated in its strongholds. In acute stages rest and the administration of purgatives should be employed. In an examination made of prostitutes, one writer has stated that the urethra was infected in practically all cases. In the early stages the parts should be mopped off with a weak carbolic creolin or permanganate of potash solution.

Injections into the female urethra should be done with care, on account of its probability of reaching the bladder. In this connection instruments should be used guardedly. Vaginal douches are of benefit, after which the vaginal canal may be packed with gauze.

New York State Medical Association.

New York City, Oct. 24-26, 1899.

(Concluded from page 1165.)

ADVANCE OF OUR KNOWLEDGE OF TYPHOID FEVER.

DR. E. G. JANEWAY, New York City, detailed some interesting cases illustrative of the different types and complications sometimes encountered. He especially warned practitioners to be ever on their guard, when treating typhoid, for the sudden and often disastrous development of a suicidal tendency.

DR. WILLIAM H. THOMSON presented a study of the "Statistics of Typhoid at the Roosevelt Hospital for the Past Ten Years." The total number of cases was 368, and the total number of deaths, 25 or 6.8 per cent. Of the fatal cases, 56 per cent. succumbed within a week after their admission, so that but little time had been given to secure the benefits of treatment. Diarrhea and tympanites had been very infrequent, and this he was inclined to attribute to discarding the old beef tea and using an exclusive diet of equal parts of milk and lime-water. In 321 of the cases there had been no delirium. Relapses occurred in 15 per cent. He favored giving a purge of calomel and jalap every third night up to the end of the second week, and the free use of pepsin and bismuth throughout the disease. Cool baths were given whenever the temperature had reached 103 F., and there seemed to be less depression where the artificial Nauheim baths had been employed.

DR. REGINALD FITZ, Boston, gave a historic sketch of the principal methods of treatment that had been in vogue in the Massachusetts General Hospital during the past fifty years. Notwithstanding the varying modes of treatment and diet employed, he concluded from this study: 1, that the treatment of typhoid fever does not now materially differ from the principles laid down as long ago as 1839; 2, that the average mortality had not changed since the days of active purgation and venesection; 3, that intestinal hemorrhages and relapses are just as frequent now as at any previous time, and 4, that considerable latitude in the matter of diet is not only permissible, but may possibly be of benefit.

DR. A. A. SMITH, New York City, presented some phases of typhoid as observed in the Bellevue Hospital. This study was based on 87 cases. The mortality had been 9.6 per cent. Chills and diarrhea had each been noted in 57 per cent., and relapses in 9 per cent. In 59 cases examined for the Widal and diazo reactions, the former had been present in 82 and the latter in 74 per cent. He is very careful about the resumption of solid food, and directs that it be not given in his wards until the temperature has remained at the normal for a week or ten days.

DR. A. JACOBI spoke of the disease as seen in children, and particularly regarding its management. He advises using internally bismuth, sulphocarbolate of zinc and salol, weak hydrochloric acid water as a grateful potion, and for the control of hyperpyrexia, baths chiefly, though antipyrin is occasionally permissible, and is the safest of the antipyretic drugs.

DR. DE LANCEY ROCHESTER, Buffalo, N. Y., contributed a short paper on the "Local, Non-Surgical Treatment of the Intestinal Tract in Typhoid Fever," in which he especially advocated the intermittent use of calomel and repeated colonic flushings.

DR. W. W. KEEN, Philadelphia, discussed the "Treatment of Perforation of the Bowel in Typhoid Fever." This paper will appear in the JOURNAL.

DR. ALVIN A. HUBBELL, Buffalo, briefly considered the eye complications apt to be met with in connection with typhoid.

TWO CASES OF LARGE RETAINED HERNIA.

DR. H. O. MARCY, Boston, reported these two cases, which were intended to convey a warning regarding the danger arising from interference with the action of the heart by excessive intra-abdominal pressure.

DR. W. B. DE GARMO suggested that this real danger could be minimized by prolonged rest in bed, efforts being made at the same time to return as much of the hernia as possible.

ADMINISTRATION OF NITROUS OXID WITH AIR OR WITH OXYGEN.

DR. THOMAS L. BENNETT, New York City, contributed this paper. He said that the admixture of oxygen with nitrous oxid in definite proportions, such as was possible with the Hewitt apparatus, gave an ideal combination, but one requiring much experience and care in its use in order to give satisfactory results. This form of anesthesia was particularly useful in tooth extractions, opening abscesses, curettings, dilation of the anal sphincter and breaking up adhesions in joints, and where ether and chloroform were inadvisable.

SPHERE OF DRAINAGE IN SURGERY OF APPENDIX.

DR. WILLIAM S. MACLAREN, Litchfield, Conn., read this paper. He said that cases of suppuration about the appendix may be conveniently divided into two classes, viz.: 1, those in which the abscess is localized by limiting adhesions; 2, those in which the pus has entered the general abdominal cavity. The cases of the first class should be treated like abscesses anywhere else, but in those of the second class he maintained that drainage is an impossibility. Both the glass tube and the gauze strips interfere with recovery by irritating the surface of the already inflamed peritoneum. In this respect gauze drainage is worse than that with tubes. The treatment should consist in a thorough washing out of the abdominal cavity with saline solution, the introduction of peroxid of hydrogen and the final filling of the cavity with saline solution just before complete closure of the abdominal wound. By placing, in the peritoneal cavity, a quantity of fluid requiring four or five days for its absorption, the infective material will be diffused and returned little by little to the surface during absorption of the fluid, thus accomplishing the desired purpose without markedly increasing the original amount of infecting material. Again, this infecting material is presented to a much larger surface of peritoneum, thus favoring its absorption. He reported two severe suppurative cases in which this method of treatment had been successfully employed, thus demonstrating its practical as well as its theoretic value.

APPENDICITIS: TREATMENT FROM MEDICAL AND SURGICAL STANDPOINT.

DR. THOMAS B. SKULLY, Rome, N.Y., in this paper advised the use of calomel and soda and of high enemas in the early stages, together with the hypodermic administration of morphia and strychnia, with the object of allaying the nervous irritability without arresting peristalsis or locking up the secretions. If, however, evidence of improvement is lacking at the end of twenty-four hours, a surgeon should be called in.

CHOLANGIOSTOMY.

DR. B. MERRILL RICKETTS, Cincinnati, Ohio, reported in this paper two successful cases of operation, and pointed out that this might be required in the following conditions: 1, when the gall-bladder has contracted down on concretions; 2, when it is desirable to explore an atrophied biliary cyst in a case where it could not be sutured in the wound; 3, when, owing to the great size of the hepatic lobe, the gall-bladder can not be brought into the abdominal incision; 4, when concretions have escaped from the biliary tract into the substance of the liver; 5, when such concretions have become encysted or impacted in the intrahepatic ducts; 6, when the common and cystic ducts are occluded by a new growth; 7, when it is found that a hepatic abscess has ruptured into the biliary tract, filling the gall-bladder with pus that can not easily escape through the usual channel.

DIFFERENTIAL DIAGNOSIS BETWEEN CHRONIC JOINT DISEASE AND TRAUMATIC NEUROSIS.

DR. REGINALD H. SAYRE, New York City, summarized his views on this subject about as follows: 1. Neurosis is apt to follow injury more quickly than joint disease. 2. The temperature is usually lower in a neurosis and elevated in an arthritis. 3. The local temperature is apt to be much lower in a neurosis than in disease of a joint. 4. Atrophy is much more rapid after nerve injury. 5. True reflex muscular spasm is only present in joint disease.

SUBNORMAL TEMPERATURE.

DR. LEROY J. BROOKS, Norwich, N. Y., suggested in this communication the possibility of determining the near approach of melancholia, epilepsy and dipsomania by a persistently subnormal temperature.

DR. E. D. FISHER, New York City, said that while a subnormal temperature is often noted in patients suffering from melancholia, dementia or stuporous insanity, as a result of the lack of muscular activity, the general experience of those hav-

ing the care of insane persons does not support the view that such thermometric observations would have any practical value in predicting relapses or recurrent attacks of certain nervous diseases.

ETIOLOGIC RELATION OF AUTOINFECTION AND AUTOINTOXICATION TO DISEASES OF THE EYE.

DR. ALVIN A. HUBBELL, Buffalo, N. Y., discussed this subject, and expressed the opinion that retinitis and optic neuritis were distinctly toxic affections.

EFFECTS OF CERTAIN OCCUPATIONS IN THE PHARYNX.

DR. SEYMOUR OPPENHEIMER, New York City, read this paper, based on an analytic study of fifty cases. He pointed out that the younger one engaged in an occupation likely to cause irritation by the inhalation of dust and chemical vapors, the more severely would one suffer, and that the same is true of those having previously certain abnormal states of the upper air passages.

TOPICAL APPLICATION OF IODOFORM IN TREATMENT OF TUBERCULAR PERITONITIS.

DR. ZERA J. LUSK, Warsaw, N. Y., described in this paper the success that had attended his use of "iodoform poultices."

EPIDEMIC OF INTERCOSTAL NEURALGIA.

DR. THOMAS F. REILLY, New York City, described a series of fourteen cases, seen within five weeks, and characterized by recurrent intercostal neuralgia, chilliness, fever, constipation, general pruritus, and the occurrence of a herpetic eruption, sometimes along the course of the intercostals and sometimes on the lips. A similar epidemic had recently been reported from a town in Germany.

SUPPURATIVE ETHMOIDITIS AND ITS TREATMENT.

DR. FRANK S. MILBURY, Brooklyn, N. Y., stated that in his cases the antrum had been implicated in 50 per cent., but necrosis had been rare. The treatment should consist in proper cleansing of the parts and the removal of all obstruction to free drainage.

DR. FRANCIS J. QUINLAN insisted on the great importance of the respiratory function of the nose.

Chicago Medical Society.

Nov. 1, 1899.

VACCINATION.

DR. A. M. HANDSHAW presented a paper on this subject, in which she stated that as a step in the evolution of vaccination the bone point used as a scarifier and carrier of bovine virus and other things is a definite one, furnishing more typical results as to protection with less of suffering in its wake. Reference was made to Welcker's glycerinated bovine virus and sterilized needle, introduced to the profession in 1894. The Chicago Health Department adopted this system in July, 1895, the claim being immunity from sepsis and smallpox. She finds that vaccination in the negro is more difficult, on account of the epidermis being thicker and harder to scarify, and less frequently resulting in a typical vaccination, it being necessary to repeat the operation in many instances. The course of a revaccination in her experience has been very irregular, especially in the adolescent. The history of an abnormal or atypical course of vaccinia is varied, even when using aseptic lymph, the patient furnishing the nidus.

In regard to immunity to vaccinia, she has found a few persistently resistant to a successful operation, the greatest number of times that the operation has been performed on a patient to her knowledge being nine, four by the family physician, and five times by herself, the ninth operation resulting in a typical cicatrix. Dr. H. Spalding, of the Chicago Health Department, has reported a case in which ten attempts were necessary to obtain one success. The late Dr. E. Garrott found thirteen attempts to be necessary for one satisfactory result, and is reported to have said that there is no immunity to cowpox.

The speaker referred to the laws of the different states with reference to vaccination. Of eleven states and territories of the Pacific group, Colorado has a state law giving health boards authority to make provision for vaccination.

EYES AND EARS OF EMPLOYEES OF TRANSPORTATION COMPANIES.

DR. FRANK ALLPORT followed with a paper with this title, to be printed in the JOURNAL.

Hartford County Medical Association.

Hartford, Conn, Oct. 28, 1899.

CITY AND COUNTRY PRACTICE.

DR. JOS. A. COOGAN, Windsor Locks, president, opened the meeting with an informal talk in which he pointed out some of the advantages of country practice. He would urge young men, unless family assistance or other powers assure city success, to begin practice in the country. He spoke particularly of the fine work of the specialists in the cities and had a word of rebuke for the pretensions of "Christian Science" and similar sects, founded on ignorance or superstition.

CHRONIC INDIGESTION.

DR. WALTER G. MURPHY, East Hartford, read a paper on this subject, and reviewed the processes of digestion, speaking also of indigestion. He referred to the use of the stomach-tube, described the test meal and certain tests applied to it, and briefly related the history of a case under his care. In relation to diet, he disbelieves in restriction to such a degree as to increase the natural tendency of patients to worry about themselves. Diet should be nourishing and should be in some cases more liberal than is frequently permitted. In no other disease is the ingenuity of the physician taxed as much as in chronic catarrh.

Resolutions were passed on the death of Dr. James Campbell (see JOURNAL, October 28, p. 1115).

Detroit Medical and Library Association.

Oct. 16, 1899.

STUDY OF MYCOSIS FUNGOIDES.

DR. A. P. BIDDLE presented a patient with this disease, the history and condition being as follows: Mr. H., 32 years old, whose previous family and personal history was negative, had been treated for more than two years by various physicians for psoriasis. At the time Dr. Biddle saw him, the tumor stage had already developed, so that psoriasis was easily excluded, although there was some resemblance to that in the cutaneous eruption, but differing from it in that the infiltration was not so deep, the individual patch not so red, the margin not so well defined, the scales not so white, and the itching decidedly more intense. The disease had begun four years before, by an excessive itching behind the ankle bones, afterward gradually extending over the other portions of the body, with a hyperemic and scaly condition of the skin followed by subcutaneous nodules. Oozing was almost constant. After three years of this condition tumors began to form, varying from one to three inches in diameter. They were firm, rounded, more or less freely movable, ulcerated on the surface with free oozing of a watery, offensive, adhesive fluid.

The treatment in the case consisted in the removal of the tumors under Schleich's method of anesthesia. It was noticed that when a portion of one of the tumors of the neck was removed for examination, the remaining portion gradually became absorbed. Internally Fowler's solution was given, and the body was bathed daily with a 1 to 5000 solution of bichlorid. So far the tumors have not shown signs of returning and the patient's general appearance has improved.

Microscopic examination of the tumors removed shows considerable thickening of the epidermis, with large prolongations of the rete Malpighii into the cutis. The process consists of an infiltration of small round cells and a severe lymphocytosis at the bases of the papillæ in the connective tissue, also about the glands and hair follicles. In the deeper tissues of the derma a focus of round cells is found surrounding a blood-vessel. The irregular collection of cells are massed in a delicate framework of fibrillar connective tissue, which, according to some authors—Paltauf, Kaposi—consists of bundles of cutis-fibers pressed asunder.

Cincinnati Society of Original Research.

EOSINOPHILIA IN DERMATITIS HERPETIFORMIS (DUHRING.)

DR. MARK A. BROWN read a paper with this title. The patient, a man, had had his affection for over twenty-five years. Examination of his blood had demonstrated a normal red count and a slight leucocytosis; the eosinophilic cells had increased to between 32 and 44 per cent. The only other instance of this nature has been reported by Cabot, and the eosinophiles in his case numbered but 19 per cent.

POLYCYSTIC DISEASE OF BREAST.

DR. ALBERT FREIBERG read a paper on this subject, maintaining that there is a condition of this kind neither inflammatory, adenomatous nor malignant. Many photomicrographs were presented illustrating the change.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:

Per Annum, in Advance $5.00
Foreign Postage 2.00
Single Copies . . . . . 10 Cents

In requesting change of address, give old as well as new location

Subscriptions may begin at any time and be sent to

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
No. 61 Market Street, Chicago, Illinois.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Henry P. Newman, 100 Washington St., Chicago, Ill., sending him a certificate or statement that the applicant is in good standing in his own Society, signed by the President and Secretary of said Society. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership.

On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly.

Those now members of the Association should send their annual subscription direct to the Treasurer, Dr. Henry P. Newman.

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof-sheets returned, or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 61 Market Street Chicago.

Original communications are accepted with the understanding tha they are exclusively contributed to this JOURNAL.

SATURDAY, NOVEMBER 11, 1899.

EXPERIMENTAL LESIONS OF NERVE-CELLS.

During the past few years many investigations have been made, especially by means of Nissl's stain, to determine the changes induced in nerve-cells by various poisons and toxins. The methods of research have been various. Of the great list of toxic agents employed, lead, arsenic, silver nitrate, phosphorus, malonnitril, strychnin, and the toxins of tetanus, rabies and diphtheria may be mentioned as the most important. The most prominent variation from the normal structure in all these cases is chromatolysis, i. e., the solution of the chromophile bodies described by Nissl. The significance of this most wide-spread change is still a disputed question. According to Lugaro[1], alterations in the chromatic part of the nerve-cell represent a reaction of the nerve-cell to a disturbing force, and are reparable, a view which is supported by the investigations of Nissl, Nicholas[2], Goldscheider and Flatau[3] and others, who have produced chromatolysis experimentally, and then by antagonistic treatment have been able to restore the cells to their normal condition. Nichols worked with typhoid inoculations, Goldscheider and Flatau with malonnitril poisoning, counteracted by injections of hyposulphite of soda. Lugaro believes that the functional activity of the cell is dependent on its achromatic structure, a position based on the fact that the nerve-cells which have lost this part of their structure have rarely or never been seen to recover.

Lesions characteristic of any special intoxication have practically never been found. Lugaro found fatty degeneration in nerve-cells in arsenical poisoning, but Elkins and Middlemass[4], as far back as 1891, have described the same condition in phosphorus poisoning. Donaggio[5], has noticed the production of deep-stained—pyknomorphous—cells in silver nitrate poisoning, while Goldscheider and Flatau have observed a disintegration of the Nissl bodies, with deep staining of the chromatin of the nucleus in malonnitril poisoning. Strychnin and the toxin of tetanus produce, according to Goldscheider and Flatau, similar changes in the motor spinal ganglion cells. These changes are quite characteristic, consisting as they do in an increase in the size, and pallor of the neucleolus, and increase in the size, and crumbling of the Nissl bodies, the whole finally ending in a fine, granular disintegration of the Nissl bodies, together with an enlargement of the whole cell. Marinesco[6] describes the nerve-cell of tetanus poisoning as consisting of two parts: the first of these corresponds to that portion of the nerve-cell on the side of which arises the axis-cylinder process, and is darkly stained, showing scarcely any normal structure; the other part presents a normal appearance, and the protoplasmic processes arising from it are normal. Variations in the achromatic part have been noted under various pathologic conditions, but their exact nature is still unknown.

The changes produced in nerve-cells by other experimental lesions have many points of interest. The observation of Pernice and Scagliosi[7], that there is a complete disappearance of the chromatin in the nerve-cell of fowls deprived of water tends to support the view held by many, that the chromatic substance of nerve-cells represents a storage of food-stuffs. Corrado[8] killed dogs by electric shocks, and noted notchings, lacerations, mutilations and erosion of the nerve-cells.

Ewing[9] has also added much to the pathology of the nerve-cells by his recent, comprehensive study of the subject. Maltschanoff[10] affirms that the gonococcus toxin produces chromatolysis and causes vacuolation of the spinal and cerebral ganglion cells of white mice, guinea-pigs and rabbits. In more chronic intoxications there resulted a degeneration of the nerves, of the posterior nerve roots and of the posterior columns of the spinal cord.

The changes in the nuclei of nerve-cells, as described by various authors, consist of swelling, distortion, erosion, atrophy, loss of chromatic substance, displacement, etc. Catterina[11] found atrophy of the nucleus combined with degeneration into a homogeneous mass in a dog killed with morphin. Homogeneous degenera-

[1] Riv. di patol. nerv. e ment., 1898.
[2] Jour. Exp. Med., 1899, iv, 189.
[3] Normale u. Path. Anat. d. Nervenzellen auf Grund der Neueren Forschungen, Berlin, 1898.
[4] British Med. Jour., Dec. 19, 1891.
[5] Riv. sperimentale di freniatria, 1898.
[6] Pathologie de la cellule nerveuse, Paris, 1897.
[7] Il Pisani, 1895.
[8] Atti della R. accad. Medico-chirurg. di Napoli, Seduta del 27 Marzo, 1898.
[9] Arch. of Neurol. and Psycopath., 1898, vol. i, No. 3.
[10] Munch. Med. Woch., Aug. 1, 1899; JOURNAL, August 26. p. 542.
[11] Riv. di patol. mentale e nervosa 1898.

tion of the nucleus has also been noted by Gabbi[12] in experimental urine intoxication. Daddi[13] describes erosion and loss of sharp contour of the nucleus in experimentally induced insomnia, but he describes similar changes in chronic cocain poisoning[14]. The total disappearance of the nucleus has been noted by Montali[15], who produced death in animals by rapid mechanical asphyxiation. It can be noticed that none of these lesions are characteristic of any special pathologic condition.

The great amount of experimental investigation—only a small portion has been mentioned—which has been and is given to this field of pathologic histology paves the way for a more comprehensive view of the lesions of human nerve-cells. The great difficulty in the way of conclusive results from the study of human material lies in the delicacy of the technic, which requires absolutely fresh material to begin with; in the second place the relatively simple conditions of the experiment are rarely met with in human pathology. Mixed infections and mixed intoxications complicate matters, and lesions discovered in the nerve-cells are consequently hard to interpret correctly. And the difficulties of pure morphologic studies foreshadow the still greater and inherent difficulties of investigation into the mechanics and the chemistry of nervous structures.

AN ADVANCE IN PSYCHO-PATHOLOGIC STUDY.

It has passed into a proverb, that any one studying the science of medicine, as presented in any one phase of disease, must collect all the collateral knowledge possible in allied sciences, in order to view his own subject in a sound light. To a lack of this plan is due much of the immature and faulty conclusions of some clinicians who specialize in medicine. Probably the class of physicians engaged in the care and treatment of the insane have been much less open to this criticism than many other workers; which is due in no small part to the natural conservatism of their work. However, this tendency should not stand in the way of real progress, as it seems to be in danger of doing at present, in this country. A special plea against this possibility has recently been made by Dr. Van Gieson, Director of the New York State Pathological Institute, calling attention to the necessity of correlating the sciences in the study of psychiatry. Although the work of the Institute has been most praiseworthy, yet such a laboratory establishment should have closer connection with, and be an integral part of, a hospital for the acute psychoses, in order that careful clinical work may go hand in hand with psycho-pathology. The addition of bedside study to laboratory investigation of mental diseases, is essential to form a proper judgment and equipoise to neuropathologic research.

It must be admitted that psychiatry on its clinical side has not as yet received much aid from pathoanatomical study. We should investigate mental diseases by psycho-physical methods, as is so worthily represented by the psychologic school of Wundt, and put in practice in Kræpelin's clinic.

Observations on the chronic insane, especially in dementia cases, are unreliable and almost impossible of accurate record, therefore a clinic on mental diseases, in conjunction with a pathologic laboratory, should be on selected cases of acute psychoses, such as mild deliriums and hallucinatory states, and the so-called subconscious automatic conditions seen in the epilepsies; along such psychologic lines of work, psychiatric study ought to yield just as practical results as have been already obtained in neuro-pathology.

A short description of the psychiatric clinic at Giessen is given by Dr. Peterson[1], but the general principle on this research work at Giessen is detailed at careful length by the director of the clinic, Dr. Sommer[2]. Instructive and methodic lines of sensori-motor examinations are outlined. Although the necessary apparatus, on account of its expense and because of the time necessary for pursuing the work, would render it impracticable in all asylums in this country; yet it could be easily established in the larger cities, where it would be of great value for clinical instruction in medical schools. For instance, a stereoscopic cinematographic presentation of the convulsive phenomena of epilepsy, would be of the greatest value. It appears that such speculative opportunities in clinical teaching are in a fair way of realization soon, according to Dr. Sommer. These clinical representations, coupled with the use of the phonograph in the work, will place us but a short step from a new era in clinical instruction in psychiatry. From the very nature of the disease, exhibition of insane patients in clinics has always been inconvenient and unsatisfactory.

Dr. Sommer has already been able to place psychophysical methods on the insane beyond the pioneer stage. He makes many helpful and practical suggestions in his treatise, for those contemplating studies of this kind on the insane, and presents many written and pictorial illustrations of his studies.

Finally, the proceedings of a congress, where members have worked along harmonious lines by psychophysical methods in mental diseases, as has been suggested, will be an inspiration to all interested in the advance of such research.

MEDICAL INSPECTION OF PUPILS.

The unusual number of cases of scarlet fever, diphtheria and other contagious diseases in this city—and these evidently increasing—make it probable that the Board of Education of Chicago will adopt the proposal of Dr. Christopher for the employment of fifty medical

[12] Rif. Med., 1898, ii.
[13] Riv. di patol mentale e nervosa, 1898.
[14] La clin. moderna, 1898.
[15] Riv. di med. legale, 1898.

[1] Journal of Nervous and Mental Diseases, October, p. 654.
[2] Lehrbuch der Psycopathologischen Untersuchungs Methoden.

inspectors to examine public school pupils who are absent four days or more. The diseases mentioned are naturally spread more from the large congregation of children in schools than in any other way, and if this source of contagion can be eliminated by some such regulation and preventive measures as proposed, the plan ought to have the hearty support of all. That the present loose regulations are a failure is too evident to need even a mention. There are several causes for this: One is the prevalence of the faith cure craze under various names. Those who follow these fads, not recognizing the existence of disease, necessarily do not recognize the possibility of its spreading. In many cases such diseases as diphtheria and scarlet fever are liable to be of a mild form, barely severe enough to keep the children away from school, and yet be just as liable to spread the disease as a more virulent form. These cases are not seen by a physician. Physicians themselves are too prone to give way to the pleadings of the parents of the child and write a certificate of health before danger of contagion has passed. The plan proposed seems to us to be feasible, of practical utility, and can not but result in aiding the prevention of the spread of diseases among children.

From the fact that the school board will have control of the matter, if it is put in force, we may hope that the physicians employed will be selected for their capability rather than for their political "pull." As all appointments made by the board are made on the civil service plan, we need not fear on this account.

Evidently the only obstacle now in the way is the question of the legal right to use the school funds for the purpose, and on this point the board is hesitating. If such legal obstacles exist, then the sooner they are removed the better. To say that the board shall not use its funds to protect the health of the pupils is absurd, for this is being done, one way or another, continually. Further, if such a decision should be rendered, it would do away with the physical culture department, and many other important adjuncts to school life, which certainly can not be called "educational."

One of the newspapers is objecting to the proposal, claiming that it is a "scheme to give a lot of doctors a job." As there are 300 public schools in the city of Chicago, and 240,000 pupils, and only fifty medical inspectors are to be employed, these will certainly not have a very "soft job" of it, in spite of the fact that each is to be paid the munificent sum of $400 per school year. The medical profession will be the loser, for preventing the spread of disease certainly makes less work for the medical men.

THE CORNELL TRAGEDY.

The recent death of a Cornell student in pre-initiation performances of a students' secret society calls for some notice. It seems to be the practice in a few of our educational institutions to permit or even tacitly encourage some idiotic customs, on the ground, perhaps, that they give a vent to the exuberance of youth, which might possibly otherwise reveal itself in still more objectionable ways. There may be some truth in this, but, if in this way it becomes homicidal, even without vicious intent, it is hard to say that it is a satisfactory alternative for anything worse. As a psychologic study the half-grown boy is a serious as well as a comic subject, and if he could see himself as others see him, at least occasionally, it might be a useful adjunct to his education. When a tragedy like the one at Cornell occurs, it ought to bring a few at least face to face with themselves and to the realization that they are making a sorry exhibition of themselves to gods and men. These particular developments appear to be most evident in the larger universities, which to a certain extent seem to breed an undergraduate conceit in direct proportion to their size and general reputation. "Knowledge comes but wisdom lingers" in our colleges altogether too much.

IS THERE AN OXYGEN HABIT?

According to a Philadelphia reporter, a new drug habit, if it can be so called, has originated and become popular, in that city and in New York. Oxygen inhalation has become, according to him, a fashionable dissipation, and the streets in front of the "oxygen shops" are crowded with the carriages of the wealthy patrons. As yet the poor have not learned of or acquired the taste; it is confined to the well-to-do and the rich. Home treatment is declared to be still more common, and scores of wagons, he says are kept busy carrying the "oxygen pipes" from house to house. So far as we have seen, this new form of stimulation has escaped medical notice, but if there is anything in the report, and it is not entirely an invention of some sensation-mongering newspaper man, it is certainly worthy of attention. We have not seen any notice of it in the more western or central cities. The story is respectfully referred for investigation to our esteemed New York and Philadelphia contemporaries.

ALCOHOL AS A BEVERAGE.

A rather curious paper was read before the late meeting of the New York State Medical Association, the author taking the position that alcoholic drinks are a good thing as a beverage and that the recognized evils from whisky are due to drinking it when it is still too young. He says: "It may here be stated, without likelihood of contradiction, that if whisky was sold in its proper state two-thirds of the crimes and four-fifths of the insanity charged to the account of alcohol would disappear from the indictment, so bulky and terrible, that stands against it on the statute books of society." After alluding to the often quoted experiments of Atwater, he goes on to say that "alcohol in the banquet hall, in the beer garden and at the domestic hearth makes hundreds merry for every ten it makes miserable, and for every one it destroys." The cause of alcohol will scarcely be helped by an argument that admits the terrible indictment against it "on the statute books of society," or that estimates the merry-making of a hundred as justifying the misery of ten and the destruction of one.

The writer of the paper, in such statements fairly admits himself out of court. His closing advice, however, which included: "to never drink whisky before delivering a temperance lecture or preaching a sermon," almost suggests that the rest of the paper may have been largely a joke, though not a very good one.

EQUESTRIENNE REFORMS.

The Cleveland Health Protective Association, a local organization for the improvement of the physical condition of the citizens, has inaugurated a crusade against the side-saddle and the long riding-habit for horsewomen. The movement is pressed, as it is stated, for the benefit of both women and horses who suffer alike from the evils induced by the long-prevalent fashion. While one can not speak for the horse, some of the dangers of the side-saddle to the rider are obvious, and there is no good reason apparent why a woman can not ride astride as well as, if not better than, a man, aside from the embarrassment of the conventional skirt. Now that the bicycle has solved the question per se, it is not at all impossible that the change regarding horseback riding may yet be accomplished. We see no hygienic or physical difficulties in its way. However, we believe that there are more desirable reforms in this line: the "dear" slaying corset, and the long dragging walking skirt, for instance, the latter unhealthy in more ways than one.

"A NEW CURE FOR INSANITY."

It seems a wonder that with all the systems of medicine, and all of the methods of treatment exploited, and all of the cures discovered, disease has any reason whatever for existence. Osteopathy appears to be in articulo mortis, but its last gasp is attended with an ominous rattle. From Centreville, Iowa, comes the startling information that a local operator of that fad has made the discovery that about two-thirds of the cases of insanity can be cured by resetting a bone in the patient's neck. One must, however, restrain his exuberance at this announcement, and not be led to hope that insanity will at once be removed from the face of the earth, because it is only reasonable to expect that in at least a small proportion of the cases it may not be possible to effect the osseous readjustment on which cure is said to depend. The limitation has already been made that not *all* cases of insanity are dependent on this peculiar dislocation, or it may be found that they are not attributable to any *one* cause. But we live and learn.

A NOVEL MALPRACTICE SUIT.

At the last session of the Illinois legislature, as may perhaps be remembered by some of the readers of the JOURNAL, a bill was introduced to make it a punishable offense for a physician to fail to respond to a call. It was claimed to be a measure that humanity demanded, and that physicians, who were as a class benefitted by legislation, ought to be compelled to go whenever and wherever called. The bill failed to pass, with a host of other equally idiotic ones, such as have to be killed off in committee in every state legislature, but it would seem that in Indiana some lawyer has a notion that a physician's services are *nolens volens*, a common law right of whoever demands them and offers a fee. A suit has, it is reported, been brought against a Crawfordsville practitioner for refusing to attend a case, $10,000 damages being claimed. The plaintiff claims that the doctor is responsible for the death of his wife and child. The despatch says there is no record of a similar case, and that "the outcome will be noted with peculiar interest by the medical fraternity." It will be very remarkable if the outcome troubles the profession much, and the lawyer who introduces the suit must have curious ideas of the rights of individuals as to the disposition of their services under the law. The case, however, illustrates some of the notions of the laity in regard to our profession, and the endeavor to add a new variety of malpractice to those already known. If a doctor is to be held responsible for not having anything to do with cases that result unfortunately it is hard telling for what he is not responsible.

DR. WYETH'S LIFE OF FORREST.

Dr. John A. Wyeth has won fresh laurels with his "Life of General Nathan Bedford Forrest[1]," just published. His ability as a writer has been acknowledged before, but this book will entitle him to still greater honors. The subject is one on which Dr. Wyeth has been working for years, not a little of the contents of the volume having appeared as magazine articles from time to time. The work has been, without doubt, a labor of love, his admiration for General Forrest as a man and as a soldier having stimulated the author to undertake the tremendous task of gathering the vast amount of material necessary for the writing of such a book. For in a book of this character every statement made had to be verified, since critical eyes, both North and South, would be ready to detect any misstatements of facts. The history of Forrest means the history of the battles in which he fought, and this means the history of some of the most important engagements in the Civil War. While the time has not yet come for the writing of an impartial account of the battles, nevertheless the descriptions by Dr. Wyeth are as free from prejudice as it is possible for them to be written by a man engaged on one side of the great controversy. However, this is not the place for a critical review of the book as a work of history, were we capable of making such a review, or were we so inclined. We do desire, however, to congratulate the author on the excellent success he has made of his undertaking, and we are sure that our readers will agree with us when we say that as the author of such a historical work, Dr. Wyeth has added an honor to the profession of which he is one of the leaders.

ORGANIZE—UNITE—CENTRALIZE.

The medical profession yet remains palpably negligent of its splendid opportunities and seemingly careless of its grave, indeed urgent, responsibilities to civilization, in its sloth in mustering its units into a coherent corps which will possess that power and command that respect to which it is entitled by its lofty aims and self-sacrificing labor. There are too many counties in the Union that yet have no medical societies; in too many

[1] Harper & Brothers.

of the states the organizations, if they exist, are lacking in virility. United in a firmly correlated and closely conjoined series of associations, our profession can imperatively demand those well-recognized reforms that will inure to the benefit of the nation, which now, on bended knee, we but faintly suggest to the law-making powers of both large and small communities. A blind man may see that in the coming century individualism will have small place in the great undertakings of commerce, the wonderful development of industry, and the increasing efficiency of labor. Brilliant deeds will be accomplished by organizations of imposing magnitude, and by huge aggregations of capital and of labor. This is the living lesson of the hour, from which may safely be predicted the future course of industrial evolution, at least for a generation. Shall those to whom is perforce entrusted the complicated problems of life and of disease be satisfied to halt in a stage of incomplete development, while the kings of industry lead on into operations of undreamed of magnitude? The untarnished honor and eternal chivalry of our noble profession cry a thundering "No!" We must be up and doing or the vanguard of progress will find us mired in the alluring shadow of careless indolence. No matter how admittedly meritorious, it is not enough that a physician shall attend thoroughly to his own little work and duty. So much, indeed, must he do in common with his fellow-man, but there is for him yet more in life. If the medical profession shall not openly and courageously and unitedly lead in the education of the nation to the possibilities of stamping out contagious disease and to the tremendous saving of human life yet to be secured through the means of improved sanitation, who in the name of Science will? Every county in the Union must have a live society in direct relation with its state organization, and these latter in their turn must maintain some definite and cordial affiliation with the one great central representative body—the AMERICAN MEDICAL ASSOCIATION. No better time to perfect this work can be found than *now*. Let every physician who reads the JOURNAL think very seriously of his own individual duty to his profession and to his country. If his county and state are not already provided with good live working societies, let him earnestly talk to his professional friends and neighbors, that they may set in motion the wheels of organization. If his societies are tame and languishing, let him conjure up means to put into them the fire of progress in medicine and the zeal of doing useful deeds for their own sake. He will not fail of his reward who does this with a pure conscience, nor will his guerdon be but vanity.

Medical News.

DR. J. COLLINS WARREN, president of the Board of Managers of the Massachusetts Eye and Ear Infirmary, Boston, has resigned.

DR. E. B. BORLAND, Pittsburg, Pa., has been elected professor of hygiene and dietetics in the Western Pennsylvania Medical College, in that city.

THE FIRST frost of the season was reported at New Orleans, November 4. Nearly all of the quarantines have been raised, and business has resumed its normal sway.

A FIRE in the administrative building at Sing Sing prison, N. Y., damaged it $50,000. The top floor of the building was used as a prison hospital. The origin is unknown.

ON NOVEMBER 7 the citizens of Lancaster, Pa., were to vote on the bill providing for the loan of $1,382,000, believed to be sufficient to provide that city with an improved filtering plant.

AT A meeting at Windsor, England, to raise funds for the use of the British Red Cross committee in the Transvaal War, Mr. William Waldorf Astor contributed £5,000, about $25,000.

DRS. D. C. BRYANT and J. S. Foote, Omaha, Neb., were tendered a farewell reception by the students and faculty of Creighton Medical College, recently. They will make a trip to Paris.

THE PRINCESS OF WALES has placed at the disposal of the Red Cross a considerable sum of money—the remainder of a fund collected at the time of the Soudan campaign in 1885—for the equipment of a hospital-ship.

THE ITALIAN Government has established, on the Island of Pianosa, a laboratory for the production of the Haffkine anti-plague vaccin as modified by Terni of the Messina Institute of Hygiene, in readiness for an emergency.

"DIVINE HEALER" Schrader visited Altoona, Pa., a few days ago and was advised by the mayor to make his stay short. In Johnstown the medical society took legal steps to prevent him from practicing medicine without a license.

DR. J. W. BALLANTYNE, lecturer in midwifery at the Medical College for Women, Edinburgh, at the opening of the winter session delivered an eulogistic address on the life and work of Dr. Elizabeth Blackwell, the pioneer woman physician.

TWO RESIDENTS of Carlisle, Pa., died October 29, under circumstances indicating poisoning. Examination developed that both had eaten apple butter which had been scraped from the bottom of a copper kettle in which it had been boiled.

THE NUMBER of so-called medical journals published in Paris was 186 in 1897; in 1898, these had increased to 206, and at the present time, according to the *British Medical Journal*, they number 215. Most of these, however, are more of the nature of advertising circulars, rather than scientific.

SURGEON MAJOR RONALD ROSS, of England, who was some time ago sent to Africa by the Liverpool School of Tropical Medicine, to make investigations on the transmission of malaria by mosquitoes, has returned to England, having made important discoveries in regard to this question.

IN ADDITION to the regular army force, the medical staff in South Africa has been supplemented by the employment of fifty-six civilian appointees who will have a horse, £1 per diem, and the allowance of a captain. This is apparently the British counterpart to our system of appointing "contract" surgeons in time of emergency.

TORONTO will experiment to the extent of $3000 in an aseptic tank system of sewage disposal, to be under the

control of the city engineer and the medical health officer. It is altogether likely that at the municipal elections on January 1, next, a by-law asking for $2,000,000 for a sewerage system will be submitted to the ratepayers.

AN ANTITUBERCULOSIS league has been formed among the physicians of the Argentine Republic, with the definite aim of collecting funds to erect a sanatorium for children, on the sea coast, and eleven other measures for the suppression of tuberculosis. A national congress every four years is part of the plan.

THE AMERICAN women residing in England are following out the idea started in this country during our recent war, and are fitting out a hospital ship. The *Maine* is the ship secured, and neither labor nor pains are being spared to perfect it in all its arrangements. Lady Randolph Churchill seems to be the leader in the movement and will go with the expedition.

THE RELIGIOUS sect known as the "Anointed Saints," in the vicinity of Marengo and Milltown, Ind., according to the lay press, still continues to defy the health authorities in refusing to secure burial permits. Six deaths have occurred in which medical assistance has been declined, and thirty-five cases of typhoid fever are said to exist within a radius of a few miles.

THE SUIT for malpractice against Dr. Robert E. Coy of Rockford, Ill., in which the plaintiff asked for $10,000 damages, was on November 1 dismissed, the plaintiff paying the costs. The case was one in which diseased bone was removed from the foot, and later, the disease extending, the foot had to be amputated. All of Coy's professional confrères were ready to endorse his conduct of the case.

A MAN appeared at the Reading (Pa.) Hospital recently, dressed in overalls and carrying a box of tools, and stated that he had been sent to do some necessary repairs for the gas company. On attempting to leave, later, he was recognized as being a thief who had played the same game four years before, and was halted by a pistol. On being searched he had several hundred dollars of stolen money and jewelry taken from the rooms of patients.

THE CORRESPONDENT of the *Lancet* (October 28), writing from India on October 5, says that a further great increase in the mortality from plague has taken place, there being "5702 deaths recorded for last week as compared with 4977 for the week previous." The increase is almost entirely in the Bombay presidency, which accounts for no less than 5178. More medical men and nurses have been obtained for plague duty, 9 doctors and 21 nurses having arrived September 30.

THE CONCLUSIONS of a communication on the care of infants presented by Lobit at the French Congress of Medicine last year were published and distributed by a druggist of Lyons, with the addition of a supplementary "conclusion" recommending certain preparations manufactured by himself. Sued by the doctor, he was condemned to pay three hundred francs damages, and forbidden to make use of the "aphorisms, works and name of Dr. Lobit" in advertising his preparations, under penalty of fifty francs for each infraction.

ACCORDING to the *Indiana Medical Journal*, November, the supreme court rendered a decision in Ohio, October 24, which has the effect of legalizing the practice of osteopathy in that state without the formality of securing a license from the State Medical Board. The decision was rendered in a case carried up from Lucas County, the supreme court holding that the manipulations which form the mode of treatment in osteopathy do not come under the law.

DR. W. R. SPRATLING, Sonyea, N. Y., presented the claims of the epileptics of Illinois before the Conference of Charities and Correction, recently held at Bloomington, Ill. His suggestion was that the state secure large acreage and available soil and establish a colony and provide employment for the patients. The insistent point was that it be a colony, not an asylum, as are the institutions of Massachusetts, Pennsylvania and Ohio. The economy of colonization was illustrated and Dr. Spratling claimed the proof of it in the three years' experience of the Craig Colony.

IT IS evident that 1899 will rank among the most murderously epidemic years. The statistics from Poonah, India, for instance, according to *Sem. Med.*, show that there have been more deaths from the plague in the last three months than during the three years preceding. From September, 1896, to June, 1898, there were 8679 cases, with 6548 deaths; from June, 1898, to June, 1899, there were 1118 cases, all dying but nine, and since June there have been 9791 cases and 7618 deaths. Sanitary measures have been strictly enforced during these three years, but now the inhabitants petition to have them abandoned, as their inefficiency seems to be fully established.

THE SECRETARY of State for India announced recently in the British Parliament, that the hospital admission rate per 1000 for the Indian army has been slowly but steadily decreasing. In 1898 it was 363, in 1897, 486, in 1896, 571, and in 1895, 522. This decrease is noted in spite of the fact that the new cantonments' rules, to which it is mainly attributed, had not fully come into operation at the time of the report. The ratio in 1898 is the lowest since 1887, and the reduction over that of 1897 the greatest ever noted in a single year. The figures, though they are yet, as the secretary admitted, sadly high, are certainly encouraging and indicate that the measures now in force are effective. He hopes to see them still further reduced under the present system of control.

COLOR PHOTOGRAPHY AS APPLIED TO MEDICINE.—A demonstration of color photography at a recent meeting of the College of Physicians of Philadelphia opens vast possibilities in the way of its application to medicine. By taking photographs of colored objects through red, green and violet glass, and properly superimposing the images, it is possible to accurately reproduce all of the various hues of the original. In this way may be demonstrated normal and morbid specimens, cutaneous lesions, and all varieties of clinical and pathologic manifestations of a physical nature. As yet, success has not been obtained to a practical degree in making permanent printed reproductions, but it seems an easy transmission from the present stereoscopic views to colored pictures. The instrument described is known as a photochromoscope. The suggestion was made as early as 1861, by an English scientist, Clerk-Maxwell, that three photographs representing the three fundamental colors could be optically blended so as to reproduce a photographic image, showing the colors, as well as the forms, of objects; but this seems not to have been successfully adopted until 1888, when Frederick Ives perfected devices that have finally led to the development of instruments by which the desired end has been attained. The same principles are also employed in the making of color prints.

Correspondence.

Correct Use of Words.

CHICAGO, Nov. 4, 1899.

To the Editor:—The former usage of the Latin word *sutura*, and its English derivative suture, always had three meanings: 1. a seam, or the line of union made by sewing parts together; 2. the seam-like lines of junction of the cranial bones; 3—in surgical use—the thread used to make the row of stitches composing a suture.

According to the best authority the Latins did not apply the word *sutura* to a single stitch. For the latter they employed a phrase of two words signifying "a passage of the thread." There was also a rare word, *punctio*, for stitch, but it almost never appears in their literature.

When our medical ancestors dropped the Latin and began to write their works in English, their dignity, or perhaps their pomposity led them to feel that the use of the word seam was too much like the low phraseology of cobblers and tailors, so they altered the Latin word *sutura* to make the English suture. However, they were not entirely relieved from contact with the despised English tongue. There was the word stitch and no Latin derivative for it, but they made the best of it, and manfully concluded to use it, so that stitch and suture were in these days never confounded. General literature has never changed in that respect. The great dictionaries of the English language are nearly or quite unanimous in stating that stitch and suture are not synonymous. Webster, Worcester, "The Century Dictionary," "The Standard," and the "Encyclopedic" dictionaries agree in this. All the earlier surgical authors, and the older medical dictionaries agree on the same point.

However, a change set in. About forty years ago careless, or illy-educated surgeons, both in this country and in England, began confusing the two terms. The medical dictionaries held back at first, but by degrees they yielded to the constant pressure of the blunders in professional books and journals, and now they are giving a set of definitions which, in a blundering and confused way, admit that stitch and suture are or may be synonymous terms. Highly educated medical writers still cling to the pure English use of the words, but the blunderers are apparently winning the victory by the sheer pressure of superior numbers.

There are surgeons of great merit whose writings are continually helping on this deterioration. It is a matter of regret, because it lowers the standard of English clearness and precision. One writer says, nearly as follows: "I closed the incision with a suture six inches long, . . . by inserting fifteen sutures about a centimeter apart. Here the writer, a man of high reputation, actually claims to have made one suture by putting in fifteen sutures. Scores of reputable writers are blundering in the same way. I give no names because I am fighting literary errors and not combating individuals.

It is apparently the useless introduction of the Latinized term "suture" which has led to this error. No one would ever have confounded seam and stitch, but suture, not being vernacular, is a hazy term in many minds.

It is best for the clearness, honor and influence of our professional literature that we use the simplest and purest English possible. Yet a surgical writer said to me not long ago that he preferred to use as many Greek and Latin derivatives as possible, so as to add dignity to his words.

I know that we have to express many objects and facts which have no English names, and hence we can not avoid all technical terms, but the evil is that unskilled writers load up their pages with an enormous and unnecessary amount of such rubbish. Any excess of technical verbiage conceals clear thought as the scabbard conceals the sword. Draw the blade when you wish to strike home.

The long Greek and Latin derivatives of our college days, when uselessly lugged in, have a musty smell. They are the dried catnip of literature. Like bunches of herbs hanging on the rafters of housewives' garrets, they swing and rattle in empty heads, giving forth only an ancient medicinal odor.

3912 Lake Avenue. EDMUND ANDREWS, M.D.

Milk from Tuberculous Cows.

WORCESTER, PA., Oct. 16, 1899.

To the Editor: In vol. xxxiii, page 988 of the JOURNAL, you say: "Considerable positive evidence exists of the danger from use of milk derived from tuberculous cows." This statement and statements like it are very misleading and can not be accepted by one that has given the matter much thought. It has by no means been proved that the disease is transmittable from bovine to man or vice versa, and yet this is a question that should be decided.

Such statements will have a discouraging influence on scientific investigators. It certainly has not been proved that man will take tuberculosis from milk of cows or from their meat, and expressions like the above are accountable for so few investigators working up this subject at the present time.

Very truly,

E. G. KRIEBEL, M.D.

[It has been abundantly demonstrated that the milk of tuberculous animals—and in less degree its secondary products, butter and cheese—contains tubercle bacilli, and inoculation of lower animals with such material has been followed by the development of tuberculosis. (See JOURNAL, Feb. 18, 1899, p. 373.) We are not aware that analogous experiments have been made on human beings, but it is the consensus of opinion that there is an intimate relationship, if not actual identity, between the bacilli of animal and of human tuberculosis. ED.]

Association Committee on Legislation.

CLEVELAND, OHIO, Nov. 1, 1899.

To the Editor: Readers of the JOURNAL will remember that at the Columbus meeting of the ASSOCIATION the Committee on Legislation, of which Dr. H. L. E. Johnson, Washington, D. C., is chairman, was authorized to invite, in the name of the ASSOCIATION, the army medical service, the navy medical service and each state society of legally qualified practitioners of medicine, to send one delegate each to a conference to be held at Washington, D. C.; such conference to consider the medical and sanitary legislation now pending, and the members of the conference to report to their respective societies such action as ought to be taken. It goes without saying that the members of the conference will push to their utmost ability those measures on which the profession is now in substantial agreement, such as, for instance, the measure to establish a national board of health, which we hope will be got through at the coming session of Congress. While the committee representing the AMERICAN MEDICAL ASSOCIATION carries weight with Congress, its members can not appeal to the senators and representatives from a given state with the directness and force that a committee can which has been appointed for that purpose by the medical association of their own state. Nor will a resolution passed by the AMERICAN MEDICAL ASSOCIATION come home to them like an expression of opinion from the physicians of their own state—men whom they know and of whose character and attainments they are personally cognizant. Each congressman will say to himself, when the committee from his own state calls on him: "If the state medical society regards that matter of sufficient importance to send a man here and pay his expenses there must be something to it, and I can afford to give it my careful consideration," and unless there appear strong reasons to the contrary the measure is likely to get his hearty support. While denominated a "conference," in the resolution, such an assembly of representative men from the AMERICAN MEDICAL ASSOCIATION and the various state societies, called together for business, would run little risk of degenerating into a "talking match." The first day's session would definitely determine what were the measures on which the medical profession had already agreed, and which of those were in such shape before Congress that they could be advantageously pushed. Forenoons could be spent by the members of the conference interviewing their respective senators and representatives, and by special committees of the conference appearing before the committees of Congress having such legislation in charge. Afternoons and evenings could be spent by the conference in deciding which measures it would be best to "tackle" next, and a report could be agreed on, which the members would submit to their respective societies for ratification or rejection. In three or four days so spent every member of both House and Senate will have been

interviewed by a physician duly accredited from his own state; hearings will have been had before the proper congressional committees, and matters will have been systematized for future action. The conference can then adjourn, leaving the permanent committee in Washington and vicinity with full power to act. That committee would then represent in the minds of the congressmen, not merely the AMERICAN MEDICAL ASSOCIATION, but the organized medical profession of the United States. It could see that the proper bills were introduced, that they were before the proper committees and in such shape as to be pushed by the next conference when the members came together fortified by the action, not only of the AMERICAN MEDICAL ASSOCIATION but of their respective state societies as well. This move of the AMERICAN MEDICAL ASSOCIATION makes it possible for the opinions of the medical profession to exercise a steady pressure on Congress for the public good. It furnishes a means by which the consensus of the mature judgment of the medical profession of the United States can find authoritative expression, and puts it out of the power of irresponsible physicians, with time on their hands and "money to burn," to air their fads before congressional committees under the guise of medical opinions.

Respectfully,

L. B. TUCKERMAN, M.D.

Medicine in the Far East.

(From Our Special Correspondent.)

KIOTO, JAPAN, Oct. 4, 1899.

THE FOREIGNER'S STATUS.

When over a generation ago Japan was compelled to abandon her position of isolation and open her doors to the ingress of western trade, and western ideas, her rulers wisely concluded to profit as much as possible by this new innovation, and allow her people to imbibe as much of western learning as it was possible for them to assimilate. Hence, she sent her brightest youths to Europe and America, to be instructed in their best institutions of learning, as well as inviting men of eminence to come to Japan and act as teachers in her own institutions of learning. From some cause or other, Germany was chosen as the country where most of these young men were sent to be educated; and German professors were called, in the main, to fill chairs in Japanese colleges.

The army that achieved such phenomenal success in the war between Japan and China, was drilled by German officers. A couple of decades ago nearly all the professors in the medical department of the Imperial University at Tokio were Germans. To-day, however, with a medical faculty composed of twenty professors, all the Germans but two, viz., Prof. Erwin Baelz and Prof. Julius Scriba, have been weeded out.

In fact, this weeding out process extends through every department where foreigners formerly held positions. A decade ago English engineers ran all the engines on all the railroads in Japan. To-day not a single one is to be seen. The German officers who once drilled the Japanese soldiers have been dismissed and their places filled by natives. In fact, the prints here boast that in a generation Japan has been able to stand abreast of the West in all the higher departments of learning, and predicts that at the end of another generation she will be able to eclipse all her rivals.

In the service of Dr. Scriba I saw considerable surgery, and though he stands high as an operator and teacher, his technic was not what one would have expected from a German as far as cleanliness and antisepsis are concerned. He uses chloroform exclusively as an anesthetic, because he considers it safer than ether, and sets his patients upright when operating on the face and head, because this position, he says, lessens the tendency to hemorrhage, never hinting at the fact that such a position immensely increases the danger of the patient's dying from the effects of the chloroform.

Prof. Baelz is a fine teacher of clinical medicine and, as a general practitioner, probably stands at the head of his profession in Japan. Speaking of his German colleagues who have been let out of the medical faculty here, he told me that he had wanted for some years to resign his chair and devote the balance of his life to anthropology, but the authorities seem disinclined to let him go. The explanation of his being retained is probably the fact that, a few years ago, he attended one of the royal family, and was accredited with saving the patient's life, and in consequence the Mikado is desirous of keeping him within calling distance. Despite the fact that nearly all the German teachers have been sent home, German text-books are still the standard authorities, and bed records are kept in German here in Tokio.

Prof. Baelz, in his clinical teaching uses the German language exclusively. In former years I have met a good many Japanese medical students abroad. And after my acquaintance with these, those I saw at Tokio were a sad disappointment; for while they were extremely attentive as students, the most of them appeared to belong to a lower class socially than their fellow countrymen whom I had met in Europe. A majority of them understand the German in which I heard them taught but imperfectly.

DISEASES PREVALENT IN JAPAN.

I learned from Prof. Baelz that genuine croupous pneumonia, erysipelas and acute articular rheumatism are three diseases that are extremely rare in Japan. Nearly all the pneumonia he encounters here is of the infantile type, which he treats with oft-repeated warm baths, with little or no internal medication. I saw a good many cases of typhoid fever in the wards of the Imperial Hospital at Tokio. He tells me that while the sanitary condition of the capital has been immensely improved during the last quarter of a century, typhoid fever has constantly increased. Before the influx of foreigners into Japan the disease could hardly be said to have existed at all; the germ that produces the disease was imported from abroad. After giving a thorough trial to most of the popular remedies for treatment of this disease, including a modified form of the Woodbridge treatment, for the last five years he has used nothing but camphor, and considers the drug superior to any remedy he has ever employed. He gives one gram of the drug in the twenty-four hours, divided into six doses.

BERIBERI.

I saw here at Tokio, in the Imperial Hospital, my first cases of that Asiatic disease beriberi. Those I saw were nearly all the result of typhoid fever. A weak circulation, a rapid pulse, and a condition of partial paraplegia were symptoms that existed in all these. The disease is extremely prevalent in Japan, Dr. Baelz having the records of a thousand cases he has treated. He believes there are 50,000 annually in the entire empire. Those who have had a large experience in the management of the affection do not agree as to its cause. The chief of the Japanese medical marine service, Dr. Takali, thinks that it is caused by a deficiency of albumin in the diet of the great masses of the people, and hence his chief element in its treatment is to supply this deficiency by giving the patient freely of egg and the like. Dr. Baelz, however, does not hold to this theory as a causative factor in the production of the disease, but believes that altitude plays an important rôle in its production, and hence sends his patients, when possible, to the mountains, giving them at the same time digitalis, strychnin, etc. Statistics show that from twenty-five to fifty in every thousand of those attacked succumb.

DIABETES MELLITUS.

Contrary to what one might expect among a population whose diet is composed largely of articles that contain a large amount of starch, diabetes mellitus is a very rare disease in Japan. Instead of putting his patients who suffer from this malady on a meat diet, which is poor in quality and dear in price here, Dr. Baelz gives them beans almost exclusively, the *Phaseolus radiatus*. Opium and salicylate of soda are the only drugs he gives, and on this plan of treatment his patients usually rapidly recover. An unimpressible condition of the nervous system of the Japanese as a race, may account for their partial exemption from this disease.

TUBERCULOSIS.

Tuberculosis is very prevalent, especially among the upper and middle classes who live sedentary lives. The laboring classes, however, who live out-door lives and take considerable bodily exercise, are less liable to the affection. The theory that is advanced to explain this condition of things is that persons who live on a diet composed largely of rice and the like, must use active exercise to consume its waste products, or the system becomes contaminated. Therefore the albuminoids and fats ought to enter largely into the diet of those who are not employed in manual labor.

EFFECT OF VEGETABLE DIET.

An acid form of indigestion is very prevalent among the rice-eating Japanese; and is attributed to the fact that they eat very rapidly, and thus do not mix a sufficient quantity of salivary secretion with their food before swallowing it. I saw in the out-door clinics a good many patients sent away without medicine, who were thus affected, with the simple injunction to eat *slowly*. No more convincing argument in favor of a vegetable diet could be produced by a vegetarian, than the apparent robust health and enormous muscular development that one sees among the laboring classes in Japan.

At the Crystal Palace in London, at a variety show in Paris, Berlin or Vienna, the man who performs the most herculean feats is very likely to be a Japanese who never ate a pound of meat in his life. Physicians here claim that conditions of anemia from whatever cause produced, are not improved by a meat diet. At the Red Cross Hospital, the most modern institution of its kind in Tokio, milk and rice are the two articles of diet relied on where the object is to build the patient up as rapidly as possible. Milk here is wretchedly poor in quality and very little used by the population in general; and unless it be near large towns where cows are kept, to furnish milk for foreigners, you may travel for miles through the country and never see a single specimen of the bovine species. Along the sea coast fish forms part of the diet of the Japanese, but in my travels in the interior I saw little eaten by the people except rice, beans and millet.

SYPHILIS AND LEPROSY.

The German physicians here tell me that syphilis is less frequent in Japan than in Germany, and a peculiarity of the disease here is that the secondary skin symptoms are very generally absent, thus adding to the difficulties of making a correct diagnosis.

That frightful disease, leprosy, is widely prevalent in Japan and I found in Prof. Baelz a man who has studied the subject most thoroughly, and who entertains some most positive views on the subject. He began our interview by saying that he was the only physician in the world with any reputation to lose who claims that he can cure leprosy. The Doctor is a violent opponent of the generally received opinion as to the contagiousness of the disease, and though he does not deny that the malady is sometimes transmitted in this manner, he holds that this is the exception. He treated his lepers for years in the same wards with his other patients, and during that time neither his nurses nor any of the sick who came in contact with them ever contracted the disease, though no special precautions were used. He sent out letters of inquiry on this subject to a large number of Japanese physicians and got a report of five thousand cases that were under observation, and in only two instances could it be proven that the disease had been conveyed directly from one person to another.

There is a Japanese physician in Tokio who keeps a sanitarium for the treatment of this class of cases and he, too, is not a believer in its general transmissibility from one person to another, except when such persons occupy the intimate relation of man and wife. This man practices what he preaches, for nearly all his servants are lepers, and he claims that in no instance have they conveyed the disease to others.

Dr. Baelz's theory is that the disease is in its first stages one of the skin only, the deeper tissues becoming involved only at a later period. His treatment consists in rubbing the parts with pumice stone until the cuticle is removed, and then sprinkling over this surface pure salicylic acid. After a few applications of the remedy in the pure form, he uses it later diluted with starch. A part of his treatment, however, that would be difficult for the poor leper at a distance to avail himself of, is the use of the baths at Kusastsu, near Kioto. The waters of these springs contain a large amount of free sulphuric acid, beside iron, alum and arsenic, and act as a violent irritant to the skin if used for too long a time. Most of the cases that Dr. Baelz treated and claims to have cured were from the Sandwich Islands. I called at the well-equipped bacteriologic laboratory of Prof. Kitasato but found him out of the city. The reader will remember that a few years ago the public prints announced his discovery of the leper germ as well as a serum that would cure the disease. Prof. Baelz tells me that nothing of practical value has come of his highly creditable work.

WORK IN GYNECOLOGY AND OBSTETRICS.

Prof. Gentatsu Hamada has the chair of gynecology and obstetrics in the Imperial University, and as an operator in his line is probably the foremost man in Japan. He was educated largely under Freund, at Strasburg, and has imbibed all his master's notions in relation to antisepsis in surgery. His service occupies a series of pavilions that open on each side on to a veranda which is enclosed by glass shutters that can be opened or shut as the weather demands. At the entrance of the central building I was met by a servant, who removed my shoes and furnished me with a pair of felt slippers to wear in their stead. The floors of the whole building were of hard wood, over which there appeared to be a coating of lacquer, and they were as free from dirt and dust as possible. Before I entered the operating-room I put on a cotton gown.

Just before operating Dr. Hamada takes a warm bath, and after that puts on no clothing except a thin sterilized cotton gown. All those who take an active part as assistants are required to undergo the same kind of an ordeal. The Doctor spends from thirty to forty minutes in cleansing his hands and arms, and during all this time two assistants are scrubbing the field of operation. The faulty part of all this procedure, however, is that during this long period that intervenes before he begins to operate the patient is kept thoroughly narcotized, in fact, the reckless manner in which they give chloroform here, claiming that no fatalities result from its administration, leads me to believe that the Japanese are more tolerant of the effects of the drug than is the Anglo-Saxon race.

The doctor sticks to silk as a ligature in the abdominal cavity. He closes the wound in abdominal operations with a single row of silkworm gut sutures including peritoneum, muscles and skin. Speaking to him as to his after-management of his abdominal cases, he replied that if you do not infect your patients all other matters are of secondary consideration. I saw eight cases on which he had done abdominal sections, and in none of them had the temperature risen above 38 C., which was certainly a very good showing.

I saw more cases of vesicovaginal fistula in Dr. Hamada's service in one day, than I have seen in a whole year's hospital observation in Europe.

MEDICAL PRACTICE.

The medical profession, like everything else in Japan, is in a stage of transition. Until a few years ago medicine, like every other department of science, was copied largely from the Chinese. Her abominable materia medica was the only one in use; up to fifty years ago Chinese physicians monopolized the practice of medicine in Japan. However, latterly the authorities have required the doctors from the Middle Kingdom to pass an examination before being allowed to practice in the Mikado's empire. This examination is very thorough in anatomy and physiology, and of the last number examined not one in fifty could pass. European and American physicians are treated very leniently by the Japanese authorities, only being required to have their diplomas translated into Japanese and pay a fee of $20. I am told they are now trying to classify our medical colleges and intend only to allow those holding degrees from the best of these institutions the privilege of practicing. With a population of forty-three million Japan has 35,000 physicians, but of these less than 1500 belong to the first class, viz.: those who have degrees from a foreign or native university.

It is the policy of the government to weed out of the profession all but university men, and none but this class will in the future be licensed to practice. Fees here are extremely low, the best men not receiving over $2.50 a visit, and there are thousands in practice who only charge from 25 to 50 cents for the same service. Unfortunately for the younger men in the profession, a few prominent physicians monopolize the larger part of the best paying practice in the large cities. These men generally run private hospitals, hire all the way from ten to fifty assistants, who do most of the work but get but very little pay for what they do.

"**Bleeding Families.**"—Anyone knowing of "bleeding families"—hemophilia—is asked to send particulars to P. O. Box 494, New York City.

Canada.

(From Our Regular Correspondent.)

TORONTO, Nov. 4, 1899.

ASYLUM INQUIRY IN PRINCE EDWARD ISLAND.

There have been gross irregularities, as the evidence plainly shows—a very grave matter in itself, not only in connection with the management of the institution but also in the conduct of the inquiry. It seems to be notorious that the percentage of cures at this asylum at Falconwood is abnormally small; that trained nurses and a competent resident physician are absolutely necessary; that the food for the patients is very often of an inferior quality; that the heating arrangements are very defective, the inmates often suffering from cold; and that the visits of the trustees have fallen from 100 per annum a few years ago to fourteen in 1898. For the purpose of meeting this inquiry, the government is charged with having mutilated and "cooked" the reports of Dr. Blanchard, the visiting superintendent, especially in 1897 and 1898, when whole pages from his annual reports were cut out and probably destroyed. Unless this staunch little island is to become a by-word and a mark of reproach in its manner of dealing with these wards of the government, some drastic measures should be at once inaugurated or the lieutenant-governor should dismiss his ministry and save the fair fame of Prince Edward Island from being besmirched, the world over.

HOSPITAL ABUSES IN TORONTO.

Within late years hospitals and dispensaries have flourished to such an extent in Toronto that only a very few months back a purely homeopathic institution had to convert itself into a general hospital in order to keep in the race for patients. Some of the members of the local Board of Health have concluded that it is time to call a halt and let the various municipalities outside the city limits care for their own pauper patients and not foist them on this city. Cases have been noted where even wealthy provincials have come to Toronto and received medical or surgical attention at the ordinary hospital rate, thus cheating their own family physician at home out of his fee, as well as their attendant while inmates of the hospital here. One alderman is strongly of the opinion that the city general hospital should receive and care for all our pauper patients, and that patients shall not in future be allowed to select the hospital in which they shall receive treatment. At the Toronto General Hospital the students from the three medical colleges mostly receive their training, although within the last two or three years St. Michael's has contributed something in that direction; therefore, it is from this fact that these charity patients have been choosing the other hospitals to the detriment of the General Hospital, so as to escape solicitations of inquiring students. In view of these facts the City Relief Officer is to report on the circumstances of all applicants for hospital relief, and the Medical Health Officer has been ordered to prepare a report on the abuse of the present system. He will also recommend that all the funds voted for hospitals shall be administered by the Board of Health. It is to be sincerely hoped that a little leaven will leaven the whole lump.

"CHRISTIAN SCIENCE."

At this week's regular meeting of the Ministerial Association of this city, the Rev. J. B. Kennedy presented an interesting paper entitled: "The Errors and the Dangers of 'Christian Science'." The essayist first dealt with Mrs. Eddy under four heads, viz., as a philosopher, as a religionist, scientist and physician. He placed her with the old Platonists as a philosopher, who denied the existence of an external world and identified the subject knowing and the object known as one. As a religionist, she believes in an impersonal God who is nothing—a nonentity only as He becomes conscious and personal in man, which is but the Brahminism of India. Of course she denies the existence of disease as a physician—but sits down to cure a nothing—and then treats all disease as having a spiritual origin, produced by sowing ideas in the minds of people. Then as a scientist, she cuts the ground from under all science by saying that the testimony of the five senses is a lie, a delusion, a dream of mortal sense.

TYPHOID FEVER FROM MILK.

At the meeting of the city Board of Health this week Dr. Sheard reported that there were thirteen cases of typhoid fever in families using bottled milk, all supplied by the same dealer. He had examined the source of supply in the district whence the milk was brought, but could find nothing wrong and believes the trouble is nearer home, in these particular families, due to the fact that the bottles were not properly cleansed.

Baltimore.

PROF. W. S. THAYER has been investigating malarial mosquitoes at Newport News, Va.

DR. EUGENE F. CORDELL has been elected president of the Medical Society of the Woman's Medical College of Baltimore.

THE PATIENT who was transfixed with a chisel, as related in last week's JOURNAL (p. 1181), has done well and is about to leave for his home.

DR. JAMES M. MORRISON was recently robbed of money and jewelry valued at $200. He was stunned by the butt of a pistol and held prisoner by one of the robbers while the other ransacked the house and secured the booty.

THE FIRST set of books and papers which will be included in the Johns Hopkins University and Medical School exhibits at the Paris Exposition in 1900 was shipped to Albany, N. Y., last week, to be forwarded to the American Commissioners in Paris.

DR. H. H. BIEDLER, professor of surgery in Baltimore University, was sued by a carpenter who fell from a scaffold, breaking his right arm and left leg. The plaintiff alleged that his arm had remained stiff in consequence of Dr. B.'s unskillful treatment of it, and claimed $25,000 damages. A decision has been made in Dr. B.'s favor.

DR. JAMES S. WOODWARD, Sparrow's Point, a suburb of this city, was tried last week in the Baltimore County Circuit Court for failing to report a case of smallpox to the County Local Board of Health as required by law. The defense admitted that Dr. W. did not report the case, but claimed that he was only the local physician of the Maryland Steel Co., at Sparrow's Point, that Dr. Robert W. Johnson was the physician in charge there, and that Dr. W. was subject to the control and judgment of Dr. Johnson. It was also shown that the officials at Sparrow's Point had done everything possible to stamp out the disease, and that they had expended $1000 in these efforts; also that both physicians had used all efforts to prevent the disease from spreading. The judge decided that Dr. W. had been technically guilty, but as there had been no intention of violating the law he declined to affix any punishment.

Philadelphia.

THE BOARD of Health is at last aroused over the spread of diphtheria, especially in regions situated in the school districts, and an investigation has been ordered as to the sanitary condition of every public school building in the city. Buildings in a bad way are to be closed and disinfected. An examination is to be made of every pupil, and on any suspicion that a child has diphtheria or scarlet fever, it is to be ordered home until all danger has passed. This is all good as far as it goes. If the proper persons would go around with the one who does the "cleaning up," it would be advantageous. For example, last year a janitor—the principal custodian of the sanitary condition of the buildings—simply sprinkled iodoform around the house. Sometimes he delegates his duties to another not so prominent in politics.

THE KILLING of diseased cattle in this locality goes steadily on. In one bologna sausage factory one cow was found to be suffering from tuberculosis, and another at a different factory, while at one of the stock-yards some were suffering from this disease and others with actinomycosis. In the North Philadelphia stock-yards fourteen animals reacted to tuberculin and were ordered killed. Out of 188 calves, 60 were condemned because they were too young, and in another lot of 49, 14 were unfit for food.

ANOTHER death has occurred here, hastened by "Christian Science" treatment. A resident of Germantown, according to report, was suffering from tuberculosis, renounced medicines several years ago, and being converted to "Christian Science" treatment, the head of the craze, Mrs. Mary Baker Eddy, was

at once sent for and came to Philadelphia, but her presence did not stay the hand of the disease. Shortly before death he renounced the fad and asked for a physician.

That spirit of college men which breaks out from time to time infested the precincts of the Medico-Chirurgical College one day during the past week, among men of the sophomore and freshman classes. Two students were sent to the hospital immediately afterward to undergo certain needed repairs.

On November 3 a dinner was tendered by the Philadelphia Medical Club, in honor of Dr. Simon Flexner, formerly of the Johns Hopkins, but now of the University of Pennsylvania, and Dr. John G. Clark, a recently elected member of the faculty of the University.

At the last regular monthly meeting of the Board of Trustees of the Beth Israel Hospital, the following officers were elected: attending physicians, Edwin Rosenthal Louis Jurist, J. B. Potsdamer; attending surgeons, Max J. Stern, A. H. De Young, Melvin M. Franklin; ophthalmic surgeon, Samuel J. Gittelson; dermatologist, Isidore M. Koch; pathologist, Alexander Klein.

The Mayor has recently recommended to Councils that a row of shade trees be planted on either side of Broad Street for a distance of several miles. In his opinion $10,000 will cover all expenses.

Improvements at St. Joseph's Hospital are now about completed. Another story has been added, a new operating-room, and new quarters provided for the nurses.

Dr. Laurence Turnbull, professor of otology in the Jefferson Medical College, tendered his resignation November 6, after thirty years' service in that institution.

Chicago.

A death from hydrophobia was reported during the week.

Drs. Nicholas Senn and Truman W. Miller have returned from their annual quail-shoot in southern Illinois.

Dr. P. M. Woodworth has resigned from the Lincoln Park Board, of which he was president.

Dr. L. Harrison Mettler has an excellently written article in *Werner's Magazine*, entitled "The Poetry of Science."

The trustees of the sanitary drainage canal expect to complete the work next month. One of the most interesting exhibits from this city at the Paris Exposition will be a miniature reproduction of the canal.

There is one case of smallpox at the Isolation Hospital. The disease was conveyed by a fruit vender who arrived from Storm Lake, Iowa, October 31, and died November 8. His boarding-house room-mate has contracted the disease.

A plan has been formulated by the city council to provide eighteen small parks for the thickly populated portions of Chicago. The selection of site has been left to a committee, of which an expert sanitarian shall be a member.

The action of the city council in temporarily doubling the inspection and fumigation departments of the Health Office will not interfere with the plan for the examination of school children (Journal, p. 1181). The Board of Education at its last meeting postponed action in the matter until its next session. As the measure is in harmony with the present teaching of preventive medicine and has been strongly commended in medical and lay circles, its prompt adoption is expected.

HEALTH OF THE CITY.

The mortality from all causes was 381, which is the smallest since the week of Dec. 10, 1898. However, the situation is far from being satisfactory, according to the weekly bulletin of the Health Department. The summary of deaths by ages, sexes and causes shows a continued excess of diphtheria, scarlet fever, measles and whooping-cough, and the number of cases of these diseases indicates their almost epidemic prevalence. Their contagion is more widely spread than any time in the past fourteen years, and it is feared that the same is true of smallpox throughout the country generally.

Smallpox, says the bulletin, has prevailed extensively for more than a year, in so mild a form as not to attract sufficient attention to cause the enforcement of the usual preventive measures. The result has been the sowing of the contagion broadcast, and it only awaits favoring conditions to develop an epidemic.

The bulletin notes a steady improvement of the water-supply since the cessation of lake dumping. This has materially reduced the mortality from the "impure-water" diseases. In September there were 402 deaths from these diseases, in October only 178; and last week 30, as against 32 the week previous, and 35 in the corresponding week of 1898. A recent storm caused some pollution of the water-supply by stirring up the foul bottom of the lake, but the degree of such pollution has not been so marked as usual. Until the operation of the main drainage channel and sanitary waterway the Department still recommends that the young and non-immune should not drink untreated hydrant water.

At a meeting of the city council, Health Commissioner Reynolds presented to that body a communication calling attention to the number of contagious diseases now assuming epidemic proportions, and to the inability of the Department with its present resources to enforce the proper measures to arrest their progress. During the past month there were 1262 cases of contagious diseases reported, and with only ten medical inspectors and ten disinfectors it has been impossible to give necessary attention to these cases. He also pointed out the threatened smallpox epidemic and urged an appropriation of $4750 for the employment for three months of ten inspectors and ten disinfectors in addition to the present force. Favorable action was taken by the council, and the appointments will be made immediately.

Washington, D. C.

Announcement is made of the coming marriage of Dr. Louis Mackall, Jr., of Georgetown, D.C.

The report of Health Officer Woodward for the past week shows the total number of deaths were 97, of which 61 were white and 36 colored. There were 67 cases of diphtheria, 78 of scarlet fever and 2 of smallpox under treatment at the close of the week.

The President of the Board of Medical Supervisors has requested the commissioners to include in their estimate for the coming fiscal year, an appropriation for a police officer, whose special duty it shall be to enforce the law regulating the local practice of medicine. He is also asked that they recommend a fixed fee of $10 each for each day of meeting, for the supervisors and Board of Medical Examiners. Health Officer Woodward has indorsed the recommendation.

Books and Pamphlets Received.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

The Nervous System and Its Constituent Neurones. Designed for the use of Students of Medicine and Psychology. By Lewellys F. Barker, M.B. (Tor.) With two colored plates and six hundred and seventy-six illustrations. Octavo. Cloth. Pp. 1122. Subscription price, $6.00. New York: D. Appleton & Co. 1899.

Ringworm and Some Other Scalp Affections: Their Cause and Cure. By Haydn Brown, L.R.C.P. etc. (Edin.) Octavo. Cloth. Pp. 170. Price, $1.75. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1899.

International Clinics: A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology. Edited by Judson Daland, M.D. Volume III. Ninth Series. Octavo. Cloth. Pp. 298. Philadelphia: J. B. Lippincott Company. 1899.

Malsbary's Practice of Medicine. A Pocket Text-Book of Theory and Practice of Medicine. By George E. Malsbary, M.D., Assistant to the Chair of Theory and Practice of Medicine, Medical College of Ohio, Cincinnati. In one handsome 12mo. volume of 405 pages, with 45 illustrations. Cloth. $1.75, net. Philadelphia and New York: Lea Brothers & Co.

Loveliness: A Story. By Elizabeth Stuart Phelps. Illustrated. Square 12mo. Cloth. Price, $1. Boston and New York: Houghton, Mifflin & Co. 1899.

A Text-Book of Physiology. For Students and Practitioners. By Winfield S. Hall, A.M., M.D., Ph.D., Professor of

Physiology in the Northwestern University Medical School, Chicago. In one very handsome octavo volume of 672 pages, with 343 engravings and 6 colored plates. Cloth, $4, net; leather, 85, net. Philadelphia and New York: Lea Brothers & Co. 1899.

THE ABDOMINAL BRAIN AND AUTOMATIC VISCERAL GANGLIA. By Byron Robinson, B.S., M.D., Professor in Chicago Post-Graduate School of Gynecology and Abdominal Surgery, etc. Illustrated. Octavo. Cloth. Pp. 202. Price, $3. Chicago: The Clinic Publishing Company. 1899.

A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY. By Elbert W. Rockwood, B.S., M.D., Professor of Chemistry and Toxicology in the University of Iowa. Illustrated with one colored plate and three plates of Microscopic Preparations. 5⅜x7¾ inches. Pages viii-204. Extra Cloth, $1, net. Philadelphia: The F. A. Davis Co. 1899.

A PRESCRIPTION BOOK OF INFANT DIETETICS FOR THE HOME MODIFICATION OF MILK. By A. B. Späch, A.M., M.D., Chicago. 50 blanks. Price, 50 cents. Published by the author.

INTRODUCTION TO THE OUTLINES OF THE PRINCIPLES OF DIFFERENTIAL DIAGNOSIS WITH CLINICAL MEMORANDA. By Fred. J. Smith, M.A., M.D., Oxon., F.R.C.P., London. Octavo. Cloth. Pp. 354. Price, $2. New York and London: The Macmillan Co. 1899.

THE SCHOTT METHODS OF THE TREATMENT OF CHRONIC DISEASES OF THE HEART, WITH AN ACCOUNT OF THE NAUHEIM BATHS, AND OF THE THERAPEUTIC EXERCISES. By W. Bezly Thorne, M.D., M.R.C.P. Third Edition. Illustrated. Octavo. Cloth. Pp. 132. Price, $1.75. Philadelphia: P. Blakiston's Son & Co. 1899.

TUTTLE'S DISEASES OF CHILDREN. A Manual for Students and Practitioners. By George M. Tuttle M.D., Attending Physician to St. Luke's Hospital, Martha Parsons' Hospital for Children, Bethesda Foundling Asylum, etc., St. Louis, Mo.. In one very handsome 12mo. volume of 374 pages, with 5 colored plates. Cloth, $1.50, net. Philadelphia and New York: Lea Brothers & Co. 1899.

AN INTRODUCTION TO DERMATOLOGY. By Norman Walker, M.D., Fellow of the Royal College of Physicians and Surgeons, Edin. Illustrated. Octavo. Cloth. Pp. 248. New York: Wm. Wood & Co. 1899.

THE INTERNATIONAL TEXT-BOOK OF SURGERY. By American and British Authors. Edited by J. Collins Warren, M.D., LL.D., and A. Pearce Gould. Volume II. General and Operative Surgery. Illustrated. Octavo. Cloth. Pp. 948. Price, $5 per part. Philadelphia: W. B. Saunders. Chicago Agent, W. T. Keener.

A COMPEND OF GYNECOLOGY. By William H. Wells, M.D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Policlinic, etc. Illustrated. Octavo. Cloth. Pp. 280. Price, 80 cents. Philadelphia: P. Blakiston's Sons & Co. 1899.

PAMPHLETS RECEIVED.

Alexander's Operation. Charles P. Noble, Philadelphia. Reprinted from Amer. Gyn. and Obst. Jour.

An Adjustable Bracket for the Reid Ophthalmometer. Chas. A. Oliver, Philadelphia. Reprinted from Univ. Med. Mag.

Asepsis in Country and Private Practice: A New Sterilizer. Hamilton Fish, Ouray, Colo. Reprinted from Colo. Med. Jour.

Bacteriolology of the Accessory Sinuses of the Nose. Richard Mills Pearce, Boston. Reprinted from Jour. Boston Soc. Med. Sci.

Brief Report of a Case of Fibroma of the Eyelid. Chas. A. Oliver, Philadelphia. Reprinted from Ophthal. Rec.

Bottini's Operation and Other Treatment of the Enlarged Prostate. Robert Newman, New York. Reprinted from Med. News.

Carcinoma of the Duodenum. Chas. D. Aaron, Detroit, Mich. Reprinted from Phila. Med. Jour.

Case of Large Solitary Tubercles of the Heart. A. W. Hoisholt, Stockton, Cal. Reprinted from Trans. Med. Soc. Cal.

Causation of Uterine Retrodisplacements. Wilmer Krusen, Philadelphia. Reprinted from Amer. Gyn. and Obst. Jour.

Circumstances Under Which Chloroform is Preferable to Ether as an Anesthetic. Geo. W. Gay, Boston. Reprinted from Boston Med. and Surg. Jour.

Continued Fever of Epidemic Influenza. W. W. Johnston, Washington, D. C. Reprinted from Trans. Assn. Amer. Phys.

Difficult Points in Gynecologic Diagnosis. Wilmer Krusen, Philadelphia. Reprinted from Phila. Med. Jour.

Disease of Convulsive Tic, with Special Reference to a Hypothesis as to Etiology. Bernard Oettinger, Denver. Reprinted from Amer. Jour. Med. Sci.

Failure of Antitoxin in Treatment of Diphtheria. J. Edward Herman, Brooklyn, N. Y. Reprinted from N. Y. Med. Rec.

History of the Early Operations for Fibroid Tumors. Chas. P. Noble, Philadelphia. Reprinted from Amer. Jour. Obst.

Hydrochloric Acid, Simple Method of Administering. Chas. D. Aaron. Detroit, Mich. Reprinted from JOURNAL.

Interstitial Pregnancy, with Report of a Case Operated upon Thirteen Months after Conception. Archibald MacLaren, New York. Reprinted from Amer. Gyn. and Obst. Jour.

John Hughes Bennett: His Services to Medicine. W. W. Johnston, Washington, D. C. Reprinted from Md. Med. Jour.

Localized Tuberculosis of the Intestines. W. J. Mayo, Rochester, Minn. Reprinted from N. Y. Med. Jour.

Non-Operative Treatment of Appendicitis. T. J. Schnell, Parnell, Iowa. Reprinted from Trans. Iowa State Med. Soc.

Operations During Pregnancy. Chas. P. Noble, Philadelphia. Reprinted from Amer. Gyn. and Obst. Jour.

Observations on Surgery of Gall-Bladder. W. J. Mayo, Rochester, Minn. Reprinted from Annals of Surgery.

Observations on a New Coal Tar Product. S. A. Billings and H. A. Engelhardt, New York. Reprinted from So. Pract.

Physiologic Rhythms. Wm. Lee Howard, Baltimore. Reprinted from JOURNAL.

Pulmonary Tuberculosis with Intercurrent Typhoid Fever Complicated by Pneumonia—Triple Infection. A. A. Eshner, Philadelphia. Reprinted from Amer. Jour. Med. Sci.

Plea for Conversatism in Gynecology. F. C. E. Mattison, Pasadena, Cal. Reprinted from Southern Cal. Pract.

Prophylactic Treatment of the Uric Acid Diathesis—Amniform. J. A. Goldman, Vienna. Reprinted from Klin. Therap. Woch.

Progress in Gynecology. Chas. P. Noble, Philadelphia. Reprinted from Md. Med. Jour.

Restoration of Conjunctival Cul-de-sac in a Case of Total Symblepharon, by Means of Theirsch Skin Grafts. Chas. N. May, N. Y. Reprinted from Arch. of Ophth.

Reduction of Obesity. Wm. T. Cathell, Baltimore. Reprinted from Md. Med. Jour.

Scarlet Fever. Richard Mills Pearce, Boston. Reprinted from Boston City Hosp. Reports.

Study of a Case of Feigned Eruption. Martin F. Engman and Sidney I. Schwab, St. Louis. Reprinted from Med. Review.

True Conservatism in Gynecology. Chas. P. Noble, Philadelphia. Reprinted from Pa. Med. Jour.

Traumatic Rupture of the Urethra. E. J. Senn, Chicago. Reprinted from Phila. Med. Jour.

Therapeutic Value of Kryofine. Adolph Fasano, Naples. Reprinted from Arch. Internat. Med. and Surg.

Umbilical Hemorrhage, with Report of Two Cases. H. B. Mills, Philadelphia. Reprinted from Phila. Med. Jour.

Trade Pamphlets.

Aletris Cordial Rio Chem. Co., St. Louis.

Agentimine, Alpha-Eucain, Beta-Eucain, Anusol Suppositories, Collargolum and Unguentum Credé, Creosotal and Duotal, Rubidium Iodid, Trikresol, Utropin and Xeroform. Schering & Glatz, New York.

Feralboid. Lyptol. The Argol Company. Danbury, Conn.

Protose. Hatch Protose Company, New York.

New Instrument.

NEW TONGUE-DEPRESSOR.

BY ALBERT H. ANDREWS, M.D.

CHICAGO.

The large number and great variety of tongue-depressors already on the market make it unsafe to claim entire originality of design in the introduction of a new one. This depressor, however, has qualities which I have not seen in any other. The instrument is of steel, with narrow blade, smooth, flat handle, and has a bend, at the bottom of the handle, in which the little finger rests when the depressor is in use. The handle is set at less than a right angle to the blade and this sharp angle brings the hand close to the patient's chin.

While depressing the tongue, the physician can extend one

finger out under the patient's chin, and thus holding the tongue and chin between the blade of the depressor and the finger, he gains complete control of the movements of the patient's head. The finger beneath the chin not only gives better control of the head, but enables one to depress the tongue with greater ease both to the physician and the patient.

One of the causes of resistance and of gagging is the sensation that the instrument is about to slip down the throat. The additional point of contact between the hand and the patient's face seems to give him a sense of security and to lessen the feeling that the instrument is about to go back too far. The bend at the bottom of the handle makes it impossible for the hand to slip down on the instrument.

Miscellany.

Vaccination in Tropical Countries.—The superintendent of the Pasteur Institute at Tunis calls attention to the influence of high temperature on vaccin, and urges the necessity of refraining from making any vaccinations during the heated term.

Report on the Schleich Solution.—In the JOURNAL of November 4, page 1123, appears an article under this caption, by R. M. Stone, M.D., Omaha, Neb. Inadvertently the illus-

tration of the Stone mask—herewith given—was omitted from the article.

Bacteria in Sprinkled and Unsprinkled Streets.—Research at Freiburg has revealed the unexpected fact that the number of bacteria is on an average twice as much in the dirt of sprinkled streets as in those of the unsprinkled, according to *Archiv. f. Hyg.*, 4, showing the favorable effect of moisture on the growth of bacteria, but the number of pathogenic bacteria was about equal and the increased numbers are compensated by the stationary position of the sprinkled dust instead of its being whirled in the air by every breeze as in the unsprinkled streets.

Sanitary Laws in Greece.—The quarantine regulations in Greece detain vessels from infected countries five to twenty days, and vessels from countries in relations with others that are infected, are detained one to five days. The quarantine stations are on the islands of Delos, Corfu and at Trikera. Thanks to the constant surveillance, no epidemic has gained a foothold in Greece of late years, and many persons have sought refuge there from epidemics of cholera in Egypt and Turkey. No quarantine is maintained along the land boundary, as there is scarcely any communication by land with other countries. Beyond this the sanitary laws are the same as in other civilized countries.

Prochorow's Dynamic Theory of Therapeutics.—The advantages of adjusting the dose to the weight of the body, of which Prochorow called attention not long ago, have been tested by Taube and Akazatow, who report in *Vratch* that three to four injections in syphilis—made according to this principle—resulted in the complete disappearance of all symptoms with increase of weight and never any indications of intoxication. The injections were made in the gluteal muscle every tenth or twelfth day—.003 Hg biiodatum and .006 pot. iod. to each kilogram of body weight, or 2.2 lbs. Calomel was also most effectively administered according to this principle, e. g., .01 for each kilogram of weight, twice a day, per os.

Professional Ethics.—We see the question agitated from time to time as to the advisability of deserting that ancient institution, the "Code of Ethics." We see it stated that it has outlived its usefulness, that it needs alteration, revision, that it is old and there must be nothing old in medicine. It would seem that the object sought to be accomplished by the code is not always understood. It does not in any way restrict the honorable physician in the legitimate pursuit of his calling. It enunciates certain rules governing the physician in his conduct toward his professional brethren. But these rules are only such as govern the conduct of a gentleman toward his fellows. It is urged that charlatans, quacks and unprincipled physicians are not held in check by its tenets. This is true, but we can not combat them by descending to their level. All we can hope is that by being honorable one with another, and with the people at large, we will be appreciated and respected by the discriminating portion of the community. After all, the most important thing is a man's respect for himself; and we could have no self-respect should we violate the rules of honorable conduct among ourselves or between ourselves and our patrons. De we not overhaul our manifest from time to time? New ideas are advanced and old ones modified or discarded. We have new forms of treatment, based upon a better understanding of the causes of disease. Diseases are observed, studied, and named, that escaped the observation of our predecessors. There are new classifications and additional aids in diagnosis. But the gentlemanly spirit that actuates a physician in his daily contact with his fellows is always the same. To live up to the code is simply to be a gentleman—nothing more. We have outlived many of the traditions of the past, but the spirit of the code of ethics will obtain whether written or unwritten, so long as the medical profession recruits its ranks from the conscientious, educated, honorable portion of the community.—*Chicago Clinic*, October.

Drainage of Bile-Ducts.—The necessity of suturing at the time of operating is obviated by the system of drainage devised by Dembrowsky (*Centralbl. f. Chir.*, Leipsic, October 7), who inserts a tube through the incision in the common bile-duct. When the bile flows out at the upper end, it shows that the cross-bar below is really in the bile-duct, its lumen corresponding to the lumen of the duct. Then corking up the upper end, the bile flows unhindered toward the duodenum. The two halves are held together by the two connected rings

slipped over them and by the third ring screwed on at the top. Each end of the cross-bar below is fitted with a short, thin rubber tube, sewed in place by the holes seen in the cut. Each half of the tube is inserted separately; the one toward the duodenum first and then the other toward the hepatic duct. Both halves are then screwed together and the top corked. The tube is taken apart for removal, in the same way.

International Congress of Medicine.—The American Committee of the Thirteenth International Medical Congress met in Philadelphia, October 21. There were present: Drs. W. W. Keen, president of the AMERICAN MEDICAL ASSOCIATION, in the Chair; Geo. M. Sternberg, surgeon-general, U. S. A.; Wm. K. Van Reypen, surgeon-general, U. S. N.; Walter Wyman, surgeon-general, U. S. M. H. S.; Horace G. Miller, president of the American Otological Society; E. D. Fisher, president of the American Neurological Association; Geo. J. Engelmann, president of the American Gynecological Society; H. W. Stelwagon, president of the American Dermatological Association; Samuel Johnston, president of the American Laryngological Association; R. F. Weir, president of the American Surgical Association; A. Jacobi, president of the American Climatological Association; E. G. Janeway, president of the Association of American Physicians; Henry Koplik, president of the American Pediatric Society.

Dr. Osler stated that he had received instructions to organize the American National Committee. After consultation he nominated as members thereof, the presidents of the AMERICAN MEDICAL ASSOCIATION, Congress of American Physicians and Surgeons, and of the constituent societies composing the same, the surgeons-general of the army, navy and marine-hospital service, and the president of the American Dental Association. Dr. Osler read the following letter of instructions, which he had received from Dr. Chauffard, the General Secretary.

Honored Colleagues: I have the honor to state that I have sent you: 1. A package of subscription blanks ("Forms of Adhesion"). 2. Some account books with stubs.

1. Subscription Blanks ("Forms of Adhesion").

Please distribute these blanks as widely as possible, sending them to universities, hospitals, learned societies, in a word, wherever you deem it possible to obtain subscribers to the congress.

We have thought it wise to prepare these blanks in such form that they may be of a uniform type for all countries, which will facilitate the task of classification of the members.

Please insist that your fellow-countrymen conform to all the directions which are therein contained.

Pray distribute, together with our subscription blanks, announcements of your own, indicating the name and address of the representative of your committee to whom the subscribers in your country should address the subscription blanks when filled, as well as of the corresponding funds.

These subscription blanks should be collated by you and sent to us in groups of fifty, with the visiting cards and the corresponding stubs of the record book (vide infra).

It is then understood that these blanks constitute simply a sort of propaganda, and that we shall consider as members of the congress only those gentlemen who shall have sent to your committee the amount of their subscription, and shall have received in exchange the receipt from your account book (leaflet C).

2. Account books.

The three account books which we have sent you (series 171 to series 173) represent each fifty subscriptions to the congress. We would call your attention especially to the detailed directions which appear on the first page of the book.

The stubs of this book (leaflets A and B), which serve us at the same time for registration of the members and for our financial accounts, we beg you to fill out as legibly as possible, and not to forget to place the stamp of your committee at the point indicated on each of the three leaflets. This stamp will eventually indicate to us the origin of each inscription.

This is but the first installment, and we shall be glad to send you, if it be necessary, new account books as soon as you may request them. We beg you to send us the stubs as soon as each of the account books is filled, together with the amount of the corresponding subscriptions and the filled subscription blanks.

We trust that these account books will facilitate the laborious task in which you have kindly lent us your assistance.

Pray understand that we are entirely at your service to furnish you any further explanations which you may desire concerning our registration of members. Yours, etc.,

A. CHAUFFARD, Secretary-General.

It will thus be seen that the work of each national committee of this congress is very different from that heretofore intrusted to them. Physicians in this country who wish to become members of the congress must apply to the secretary of the national committee, who will forward a blank of application, which is to be filled in and returned to the secretary, with a fee of $5.

Dr. Osler was empowered to appoint a physician as secretary to the committee, and to secure such aid as would be necessary to carry on the work. Dr. Henry Barton Jacobs, Baltimore, was appointed to the position. The question of meeting the expenses of the committee was left to the chairman. If each national committee is expected to meet its own expenses, it was agreed either to call on the treasurers of the societies represented in the committee, or on the individual members.

The medical journals of the country were requested to aid in making known the conditions under which registration in the congress may be effected, as widely as possible.

While it is to be understood that the central committee wishes the subscriptions to be sent to the secretary of the national committee, Rule 3 of the congress provides that persons wishing to be members may forward their subscriptions to the treasurer-general of the congress.

The Public Service.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., from October 19 to and including Nov. 2, 1899:

W. Edson Apple, acting asst.-surgeon, from Washington, D. C., to Fort Columbus, N. Y.

Ira Ayer, acting asst.-surgeon, from the transport *Wright* to Camp Meade, Pa., to accompany the 41st Inf. Vols., to Manila, P. I.

William J. Boyd, acting asst.-surgeon, from Fort Riley, Kan., to accompany the 40th Inf. Vols. to Manila, P. I.

William H. Corbusier, major and surgeon, U. S. A., member of an army retiring board at Manila, P. I.

Walter Cox, lieutenant and asst.-surgeon, U. S. A., from Fort Leavenworth, Kan. to Fort Reno, Oklahoma.

William D. Crosby, major and surgeon, Vols., member of an army retiring board at Manila, P. I.

Euclid B. Frick, captain and asst.-surgeon, U. S. A., member of a board of promotion convened in New York City.

Charles M. Gandy, captain and asst.-surgeon, U. S. A., former orders directing him to accompany the 43d Inf. Vols. to Manila, P. I., revoked.

Charles R. Greenleaf, colonel and assistant surgeon-genaral, U. S. A., former orders revoked; he will proceed from San Francisco, Cal., to Manila, P. I., reporting to the commanding general for duty as chief surgeon of the Department of the Pacific and Eighth Army Corps.

Francis A. Harris, acting asst.-surgeon, relieved from Fort Banks, Mass., for annulment of contract.

A. F. Higgins, acting asst.-surgeon, leave of absence granted.

Henry F. Hoyt, major and surgeon, Vols., to accompany the 47th Inf. Vols. on the transport *Thomas* from the port of New York to Manila, P. I.

Frank R. Keefer, major and surgeon, Vols., member of a retiring board at Manila, P. I., sick leave granted.

William P. Kendall, major and surgeon, Vols., member of a retiring board at Manila, P. I.

R. M. O'Reilly, major and surgeon, U. S. A., from the Division of Cuba to New York City, reporting by telegraph to the Adjutant-General of the army for further orders.

Samuel Q. Robinson, major and surgeon, U. S. A., now on sick leave, is relieved from further duty at Fort Reno, Oklahoma.

A. H. Simonton, acting asst.-surgeon, from temporary duty at Fort Thomas, Ky., to Fort Robinson, Neb.

Benjamin L. Ten Eyck, captain and asst.-surgeon, U. S. A., from Fort Robinson, Neb. to New York City; thence to San Juan, Porto Rico, for duty in that department.

Samuel M. Walterhouse, lieutenant and asst.-surgeon, U. S. A., from duty at Forts Wood and Columbus, N. Y. to Fort Banks, Mass.

O. W. Woods, acting asst.-surgeon, from Albuquerque, N. M. to San Francisco, Cal., for duty in the Department of California.

Movements of Navy Medical Officers.—Changes in the medical corps of the U. S. Navy for the week ending Nov. 3, 1899:

Asst.-Surgeon R. Spear, detached from the *New York*, ordered home and granted sick leave for two months.

Asst.-Surgeon R. K. McClanahan, detached from the Naval Hospital, Key West, Fla., and ordered home and granted sick leave for two months.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General of the U. S. Marine-Hospital Service, during the week ended Nov. 3, 1899:

SMALLPOX—UNITED STATES.

Arkansas: Batesville, October 26, 1 case; Little Rock, October 26, 10 cases; Monanna, October 26, 1 case; Newport, October 26, 2 cases; Russellville, October 26, 1 case; Tuckerman, October 26, 2 cases.
District of Columbia: Washington, October 21 to 28, 2 cases.
Georgia: Lumpkin, October 22, present; Richland, October 22, present.
Illinois: Chicago, October 21 to 28, 1 case.
Louisiana: Concordia Parish, October 11, 1 case; New Orleans, October 14 to 28, 1 case.
Massachusetts: Chelsea, October 21 to 28, 2 cases, 3 deaths.
Michigan: Benton Harbor, October 28, 10 cases; Grand Rapids, October 21 to 28, 1 case.
New York: New York, October 21 to 28, 4 cases.
Ohio: Cincinnati, October 21 to 28, 3 cases; Cleveland, October 21 to 28, 7 cases.
Tennessee: Bristol, October 1 to 13, 30 cases.
Virginia: Portsmouth, October 21 to 28, 9 cases, 1 death.

SMALLPOX—FOREIGN.

Argentina: Buenos Ayres, August 1 to 31, 1 case, 1 death.
Austria-Bohemia: Prague, October 7 to 14, 1 case.
Straits Settlements: Singapore, September 16 to 23, 1 death.
Turkey: Erzeroum, September 23 to 30, 3 cases.

YELLOW FEVER—UNITED STATES.

Florida: Key West, October 23 to November 1, 9 cases, 2 deaths; Miami, October 26 to 31, 14 cases.
Louisiana: New Orleans, October 14 to 28, 12 cases, 4 deaths.
Mississippi: Jackson, November 1, 6 cases, 1 death.

YELLOW FEVER—FOREIGN.

Argentina: Buenos Ayres, August 1 to 31, 1 case, 1 death.
West Indies: Curacoa, October 7 to 21, 2 cases, 1 death.
Mexico: Vera Cruz, October 13 to 26, 6 cases, 2 deaths.

PLAGUE.

China: Hongkong, September 9 to 16, 18 cases, 20 deaths; Nulchwang, September 30, present in epidemic form.
Portugal: Oporto, August 16 to October 15, 160 cases, 55 deaths.

CHANGE OF ADDRESS.

Beebe, C. A., from Marshall to 508 Main St., Fond du Lac, Wis.
Brener, C. H., from Colorado Springs, Colo. to David City, Neb.
Cook, W. G., from Grand Blanc, Mich. to Hoxie Bldg, Fort Worth Texas.
Cook, W. H., from Comanche to Miles, Iowa.
Connell, D. R., from Davis, Ill. to Unity Blk, Beloit, Wis.
Chenoweth, M. S., from Elbert to 329 Santa Fe Ave, Denver, Colo.
Dunn, A. A., from Dubuque, Iowa to Belmont, Wis.
Gradwohl, R. B., from 4330 to 4940 Washington Boul., St. Louis, Mo.
Grosskopf, E. C., from Wauwatosa to 245 36th St., Milwaukee, Wis.
Hull, A. R., from Beaver Dam to Sanatorium Waldheim, Oconomowoc, Wis.
Howard, A. Z., from Dartford to 39 North Park Ave, Oshkosh, Wis.
Hayhurst, W. C., from Westport to Flat Rock.
Haven, J., from Chicago, Ill. to U. S. Consulate, Basseterre, St. Kitts, West Indies,
Hale, A. B., from 69 22d St. to 6626 Monroe Ave, Chicago.
Hilleary, J. G., from Du Bois, Pa. to 1650 Tremont St., Denver, Colo.
James, E. A., from Fort Dodge to Lake City, Iowa.
Jordan, A., from Richmond, Va. to 2026 H St., N. W., Washington, D. C.
Lichty, J. A., from Markleton to 4636 5th Ave, Pittsburg, Pa.
Mulhill, J. C., from St. Louis, Mo. to Jackson Sanatorium, Dansville, N. Y.
Mooney, E. W., from Detroit, Mich. to Upland, Ark.
Mather, R., from 35 Church St. to 376 Michigan Ave, Detroit, Mich.
Nichols, C. M., from Delaware Water Gap to 1345 Poplar St., Philadelphia, Pa.
Quirk, H. W., from 1232 to 1257 Euclid Ave, Cleveland, Ohio.
Rieman, W. H., from St. Clair to 269 Dix Ave, Detroit, Mich.
Stribling, J. S., from Walhalla to Seneca, S. C.
Simmons, W. R., from Battle Creek, Mich. to Portland, Ore.
Sanderson, P. G., from 43 W. Alexandrine to 204 Warren Ave, Detroit, Mich.
Scofield, W. K., from Stamford, Conn. to Cocoa, Fla.
Weitz, G. J., from Cleveland, Ohio, to Muncie, Ill.